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Editorials

MEDICAL CHINA

AN old medical missionary, after a life of service in China, said he had been forty years there trying to cure itch, and there was as much itch in China as ever.

Analogous experiences of medical missionaries lead to the conclusion that their work among these 300 millions is *per se* only a drop in the bucket.

Therefore, a new method was sought out: it consisted in the simple idea of teaching the young Chinese medicine and letting them do the work. So, through the work of the Rockefeller Foundation and other agencies medical schools are springing up in various parts of this great Empire of the East.

In West China, where there are some 80 million Chinese, the number of medical men bears approximately the ratio that would obtain in Canada, were

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there one medical man in Montreal, one in Toronto, and one in Winnipeg to look after the whole population in Canada.

When the great need was laid before the late Dr. R. A. Reeve by Dr. Charles Service, a medical missionary on furlough from Chengtu, West China, this humble saint gave a High Tea at the York Club—something (one of the stewards remarked to the writer of these notes) which had never been done before in the history of that famous club.

Some dozen medicos were there and a few dentists. The meeting was marked by a quiet enthusiasm. The high tea drinkers dispersed, all agreeing that something ought to be done by them in the way of building a medical school. Work was scarcely organized when their leader fell. His will showed that he had bequeathed some $7,500 to the missionary funds of the Canadian Methodist Church.

Several of the tea drinkers who had subscribed from $100 to $300 apiece to the fund, applied to the Methodist Missionary Board at their session in Toronto, and asked that body to divert Dr. Reeve's bequest to the fund started for the medical college. To this the Board agreed. A campaign was then quietly begun in Toronto by the doctors, dentists, and nurses, and is now being carried on all over Canada, to raise the sum of $100,000, deemed necessary to build and equip the two first buildings in which young Chinese will be taught medicine and dentistry, and in which nurses will also receive lectures in the preliminary sciences ancillary to nursing; their

practical work being taken in the three hospitals now in Chengtu. The nurses of Toronto alone have raised in cash nearly $3,000 under the leadership of Miss Gunn, Miss Mathieson. Miss Ellis, Miss Rowan and others.

The three professions are going to invite their lay friends to assist.

A magnificent effort! We urge every medical man, every dentist, and every Canadian nurse to contribute something, even though it be a small amount, to this fine undertaking; and we further urge them to tell their lay friends about the project, and to invite their co-operation.

DEPLORABLE DEPRAVITY

UNDER the above caption appeared in the *Globe* from Saskatoon a despatch containing a report of an address by Dr. C. K. Clarke, in which he said that his attention had been drawn to delinquency in the Toronto public schools. He mentioned incidents of 13-year-old girls being unmarried mothers, and others of the same age commencing lives of shame. Even at the tender age of 12 and 13, girls were found suffering from venereal diseases. Boys, too, he said, were found who had acquired habits associated by most people with only the most hardened moral perverts. The chief contributing factor, he stated, was feeble-mindedness.

In the same newspaper a report stated that three

boys, aged 13 to 19, at the Soo were convicted of killing Napoleon Letellier. His Lordship, Justice Middleton, in his charge to the jury, said that the present serious condition ought to convince everybody of the great responsibility of parents in the bringing up of children. "It does not indicate a very healthy condition of affairs," he said, "when parents allow their children to be out until 3 or 4 o'clock on the Sabbath morning, drinking, planning mischief, when they would reasonably be in their beds fast asleep. There is a great deal of stress laid on the need of missions for the heathen," his Lordship remarked, "but we have worse than heathen right in our own community, for the youthful criminals of to-day are more efficient than the darkened criminals we have been used to coming in contact with, *and something must be done to stamp out this kind of thing.*" (The italics are ours.)

Dr. John Noble, at a recent meeting of the Toronto School Board (of which he is chairman) censured Dr. Clarke strongly for exposing the iniquities of the Toronto school children in distant Saskatoon. "Why didn't he bring the matter to the attention of the Toronto School Board?" Dr. Noble seemed to doubt the accuracy of Dr. Clarke's indictment. Dr. Noble should have inquiry made into the matter.

We are of opinion that Dr. Clarke's accusations apply to only a small minority of the pupils, and, as he intimates, most of the cases have a pathological basis. In this connection we must recommend the

reader to peruse Healy's "Pathological Prevarication, Lying and Swindling." It will throw light on one cause of the immorality and wrong-doing of many youths in our city.

On the other hand it cannot be gainsaid that there is no pathology at the basis of most of the devilment that goes on, not only among children, but among adults as well, in our cities, and, to a less extent, in the country.

It behoves our beloved profession to do its part to stem the tide of immorality which is rising in our midst—a fact more patent to us than to any other class in the community.

We are doing much in the way of relief by establishing and conducting venereal clinics, treating the insane and the criminals, but are we doing all we can to prevent the horrible conditions we see and have to deal with?

Canadian Journal of Medicine and Surgery

Toronto Canada

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Original Contributions

MEDICAL ETHICS*

H. B. Anderson, M.D., Toronto, Ontario.

With the evolution of the Greek State, there arose a discussion of the moral or ethical relationships which should exist among its citizens, to provide the conditions under which the highest development of the individual would be possible, that he might be fitted to discharge the duties of citizenship and render the most valuable service to the common weal. It is important to remember that ethics was designed for those who exercised the rights and privileges of citizenship, and only in a limited degree applied to slaves or subject peoples.

As a system of general application to citizens, "The Science of Ethics" was formulated by Aristotle, who came of a family of physicians and, though not himself a disciple of Aesculapius, he was a distinguished biologist and one of the brilliant contributors to the dominant influence which Greek medicine held in the world for many centuries.

It has been stated that "the function of the science of ethics is the reduction of the many and diverse moral judgments to systematic unity through their common reference to a single standard of such judgment. As a science of conduct, Ethics investigates the nature of duty and seeks to construct a consistent scheme of duties; as a science of character it investigates the nature of virtue and seeks to construct a consistent scheme of virtues." Medical Ethics is, therefore, only a branch of ethics in general.

Codes of Medical Ethics as they exist at the present time, have been a gradual evolution of rules and customs since the

*Read before the Academy of Medicine, Toronto.

time of Hippocrates, to serve as a guide to physicians in their relations to each other, to their patients, and to the public. From the earliest times, the noble and dignified nature of the physician's calling has been recognized, and the highest standard of conduct set for its practitioners, than which no better example can be given than the oath of Hippocrates, long subscribed to by every candidate for a medical degree. It enunciates so many of the principles of our ethical system that I may take the liberty of quoting it:—

"I swear by Apollo, the physician and Aesculapius, and health, and all-heal, and all the gods and goddesses, that according to my ability and judgment, I will keep this oath and this stipulation: To reckon him who taught me this art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required: To look upon his offspring as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation, and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the art to my own sons, and those of my teachers, and to disciples bound by stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked, nor suggest any such counsel: And in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my art. I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this art. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief or corruption, and further, from the seduction of females or males, or freemen or slaves. Whatever in connection with my professional practice, or not in connection with it, I

see or hear, in the life of men, which ought not to be spoken abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, in all times: but should I trespass and violate this oath, may the reverse be my lot."

While the Hippocratic oath emphasizes the duty which a pupil owes to his teacher and profession, this was evidently to serve no purely selfish ends, but to maintain the honor and dignity of his calling, and obligates the physician on his part, to transmit his knowledge freely to his own and his teacher's sons and "to disciples bound by stipulation and oath according to the law of medicine, but to none others."

This was evidently in the days before "locked laboratories" or the cornering, for the benefit of a few, of scientific and other facilities provided at the public expense for as wide a use as possible.

Moreover the modern itch for publicity has apparently overcome ancient scruples about imparting information to others, yet many will question whether solicitude for the public welfare, mere notoriety or sub-conscious self-interest, is the impelling motive in much of the educational propaganda so willingly furnished press agencies, by self-constituted experts on all kinds of human ills. Could our officials, public health authorities, and especially our semi-practitioners, not work as effectively and with less offence to professional sentiment, by copying the example of the fleet or the air force, exalting the service rather than the individual?

"Into whatever houses I enter I shall go into them for the benefit of the sick and will abstain from every act of corruption," states plainly and succinctly the duties of a physician in the home—to render service to the sick—not to promote any personal or ulterior motive, especially if such involves the rights, reputation or interests of a confrere.

This is especially important in this age of specialism, where representatives of different departments are often called without consulting with the family physician, and where a meddlesome

or scheming individual has an opportunity to stir up endless trouble.

"I will give no deadly medicine to anyone if asked," covers admirably one's duty in dispensing alcohol or any other drug—which assuredly should not be given on solicitation, but prescribed only if, as a result of one's investigation of a case, it is considered by the physician to be indicated.

The oath makes it an obligation "not to cut one laboring under the stone, but to leave the operation to men who are practitioners of this work," and it will not be difficult to have our surgeons extend this stipulation to cover thyroidectomy, removal of the Gasserian ganglion or other surgical procedure requiring the technical skill of an expert.

The ethical principle involved would appear to be to give the patient, in a difficult case, the benefit of the most skilful treatment, but should not preclude anyone from operating, if he had acquired the necessary skill. Will our surgeons as readily perceive and uphold the same ethical principle, however, when applied to specialists in internal medicine, gynecology, even to the general practitioner, by leaving to each the duties which, by training and experience, he is best enabled to perform? If this rule were faithfully adhered to, each doing what he is best fitted, or quite competent to perform, and receiving the reward of his services, there would be less trouble about fee-splitting.

After the lapse of centuries no better basis for our ethical system can be found than the oath of Hippocrates, and I should like, if only on account of the historic perspective which it gives, to see it included in any code which we may adopt.

Some have considered the conception of ethics or morals among mankind to be the Divine Will expressed in revelation: others, like John Stuart Mill, that it has been a gradual evolution, seeking principles of conduct which would ensure the greatest good to the greatest number. This idea of utility to society rather than individual interest, must be kept in view in considering whether an act is, or is not, ethical.

It is the nature of the physician's calling, as it is indeed of all the learned professions, which distinguishes them from purely

mercenary occupations or trades, holding up ideals of duty, responsibility and conduct, rather than pecuniary reward as the chief aim of aspirants to honor in their ranks. For this reason the man of affairs with his more materialistic views of service and reward, often finds it difficult to appreciate the motives underlying the ethical principles of physicians, and often attributes them to jealousy, self interest, or captiousness. No doubt too narrow and literal an application of the code gives warrant, at times, to this view.

Herbert Spencer's conception of life was "the continuous adjustment of internal relations to external relations."

When we consider the multitudinous changes which have taken place in the evolution of medicine since the time of the ancient Greeks—the foundation of medical schools and hospitals, the development of the sciences, the division of medical practice into specialties, the realization of the importance of public health to the safety and wellbeing of the State, the formation of fraternal organizations, the introduction of life and sickness insurance, the influence of the press, the wider diffusion of knowledge, the multiplication of the points of contact between individuals and nations, and scores of other agencies which one might mention, we can realize the extent to which our external relations have been altered, and the degree of readjustment necessary since the days when the art was practised in the temples of Aesculapius and the groves surrounding them.

It is interesting to note that the symbol of Aesculapius, the serpent, signifies wisdom, but also that the periodic shedding of its skin, typifies rejuvenescence and change—worthy ideals for us to keep in view, but change should be guided by wisdom and experience.

If the function of the State be to provide the conditions under which what is best in its citizens may be realized, to ensure the greatest good to the greatest number, it is evident that the principles which are to govern the relations between members of subordinate groups in the State, such as our own, must be considered not only from the individual, but from the community, the national and the international points of view as well.

In discussing the question of Medical Ethics to-night, there-

fore, I shall depart from the custom of considering the subject as ordinarily dealt with in books, or in the published codes of medical societies: for every thoughtful person realizes, whether he approves or not, that in the course of time and events, the position of the physician has changed—less no doubt in his immediate relations to his colleagues and his patients than in his relation to the community and the State. As a profession we have outgrown in many ways the limits of the narrow codes which once served to guide physicians as individuals, but which often furnish no rules for guidance in the wider relations which have developed.

Before the war, the world had become saturated with doctrines of survival of the fittest, the gospel of efficiency, the will to power, the superman, and other products of German intellectuals. Too many were hypnotized by apostles of Kultur, preaching cosmopolitanism abroad and aggressive nationalism at home, who ministered to German arrogance, and furnished the philosophy and arguments which enabled their propagandists to utilize the universities and press of rival states to glorify everything Teutonic, to exploit vanity and weakness, destroy national self-respect, to anathematize patriotism.

Under such conditions no idealistic code of ethics could stand unchallenged. Subordinate groups had to conform to the ethics of the State. The war has shown that mankind is not willing to exchange the Golden Rule for the laws of the jungle, though apparently there are those in all countries, not excluding our own, if judged by their actions rather than by their precepts, who believe in Kultur as a sovereign remedy if only administered by their own wisdom instead of a Kaiser's.

No profession or group of citizens has been more disturbed than our own by recent world development, and the reasons for this are not far to seek. The interests of medicine and the influences, not always disinterested, reacting upon us as a profession, in many ways overlap national boundaries: our organization, where we have any, is democratic as compared with that of some religious bodies, the legal profession, or commercial or other corporate interests. We have no permanent officials as bishops or judges, selected for high attainment and matured

judgment, placed at the head of a profession organized as a whole, to reflect the best opinion, to maintain dignity and stability, and to guard the ideals and the best interests of our calling against factious influences within, or encroachment on our rights from without. This unfortunately, has led to the heads of subordinate medical organizations assuming, or being accorded, an influence and exerting authority over the general body entirely outside their proper sphere, which has tended unduly to exalt officialism amongst us. An autocratic, superior attitude has been characteristic of a certain type of official mind in all ages, reaching its highest efflorescence in "*der professor*" of unhappy memory. Shakespeare did not overlook it:

> "Man! proud man,
> Drest in a little brief authority;
> Most ignorant of what he's most assur'd,
> His glassy essence,—like an angry ape,
> Plays such fantastic tricks before high heaven,
> As make the angels weep."

An unfortunate tendency in such individuals is to arrogate as personal tribute place and power that are accorded only in a representative capacity in the discharge of duties for the common good. The chief end of officialism should not be to glorify itself forever; and it should submit itself at times to the chastening reflection that there is no royal road to learning and that knowledge is not created by appointment.

Moreover, in many important relationships of our work we lack self-government. The ultimate control of medical education, hospitals, public services in medicine and many other important interests, is vested largely in laymen, immersed in other activities, necessarily lacking medical knowledge and often the viewpoint, aims and ideals of our profession. In no other field of activity—political, military, religious, legal, commercial, financial, is ultimate decision so much out of the control of those with the specialized knowledge and training necessary to administer its affairs intelligently. Our work is so personal and arduous that the time of our busiest and most capable men is so absorbed that an undue amount of influence is permitted to rest in less experienced hands. If ethical principles are to be

upheld, the medical profession must be jealous to guard the honor and rights of its individual members.

One is free to admit that the fault lies largely with ourselves; if we as members of a learned profession, owing to pressing exigencies of professional work, a spirit of Chauvinism, or lack of interest, not only voluntarily relinquish authority, but even fail to exert organized influence on interests of which we are the proper guardians, we should not blame others for the results of our neglect.

Every other group has realized the necessity for organization —workingmen, farmers, Boards of Trade, manufacturers, financial and commercial interests; we alone, appear to have neglected our corporate influence.

Can we develop some permanent organization of the profession as a whole which can minimize these defects and give us greater professional solidarity and influence, for the benefit of the community as much as ourselves? The Benchers of the Law Society suggests to one a kind of body which would be of great service to our profession.

When we are establishing—very properly, therefore—codes of ethics to govern us as individuals, let us not overlook our broader rights and responsibilities as a profession and as citizens. You remember the old rhyme of the peasants:

"We hang the ordinary man or woman,
Who steals the goose from off the common,
But let the larger villain loose,
Who steals the common from the goose."

Are we to establish a uniform standard of ethics for all individuals or groups of individuals in our profession? Are we to pronounce against the patenting of remedies, advertising, undue newspaper publicity, and such like, on the part of some individuals, and condone it in others? Certainly the ordinary practitioner is not the greatest sinner in this regard. Further, shall we consider as ethical in a corporate body or an institution, actions which we would condemn in a private member of the profession?

I have dwelt on these weaknesses inherent in our organ-

ization because no system of ethics among individuals can be effectively maintained against external pressure which ignores its principles and which we have neither the will, nor at present, the power to withstand. We are rank individualists and our influence is only individual. Our authority with our patients—final and without argument—is proverbial—"You are the doctor," or "That's what the doctor ordered"—are accepted as final. The influence of this has reflected itself on ourselves as a profession. The press suggests it when in flaring headlines it announces that "Doctors differ," as if any other class of sane individuals—editors, preachers, lawyers, politicians, were ever of one mind. Our attitude in controversy, too often, is not unlike that of Cromwell's Roundheads, and makes one at times sympathize with him when he exclaimed "For the love of Christ, gentlemen, I beseech you to think it is possible you may be mistaken."

We do not deliberate or debate as members of a representative body, but tend to split into factions, seeking to do good by stealth, each assured of its own superior wisdom and purer motives. Have we ever noticed this tendency in our medical faculties, hospitals, Medical Associations, Boards of Health, or even in our Medical Council? There is too little spirit of getting together to solve our problems. We are the one profession where lack of knowledge and experience is, too often, supposed in some mysterious way to lend force to opinion.

We have a governing body in our College of Physicians and Surgeons, and the Medical Council is our executive. Has any of us ever known our representatives to call their constituents together to consult their views or wishes on any important matter? One's conduct may be considered almost reprehensible in suggesting so unusual a procedure when we have what is admittedly so excellent a body to think and decide things for us. If our officials and representatives do not show their respect for the opinions of their confreres by consulting their views, how can we expect the laymen to do so? Is this lack of cohesion not the reason for the remarkable influence exerted by irregular cults as compared with the great body of the medical profession, who can usually be counted upon to neutralize each

other's efforts by dissension or lack of interest? The exaggerated individualism of the medical adviser too readily develops into Chauvinism in regard to one's confreres, especially obnoxious when one is acting in an official or representative capacity, where it should be least in evidence.

It would be mere priggishness on our part to hold that we have any monopoly of high ethical ideals. The supreme demands of duty are recognized for all who hold positions of trust essential to the safety and wellbeing of others and is enforced by public opinion—the captain who goes down with the ship or the soldiers in a forlorn hope—the ideal is duty—not self-interest. It is a matter admitting of no alternative if we are to maintain the noble traditions which enable us to enjoy an honorable place in the community.

> "Man who man would be
> Must rule the empire of himself; in it
> Must be supreme, establishing his throne
> On vanquished will, quelling the anarchy
> Of hopes and fears, being himself alone."

In conclusion I would like to restate my point of view, that it is useless for us further to formulate ethical codes for the individual until, as a body, we establish conditions under which our principles can be maintained.

In the meantime, members of our profession who wish to be esteemed by their confreres and the community, may be trusted to conduct themselves, as they always have done, as men of honor and gentlemen.

HOSPITALS IN CHINA

By John N. E. Brown, M.B., Toronto.
One Time Inspector of Yukon Hospitals.

An inquiry has been made into the scientific efficiency of mission hospitals in China by Harold Balme, F.R.C.S., D.P.H., Dean of the School of Medicine, Shantung Christian University, Tsinanfu, China, and Milton J. Stauffer, B.A., B.D., secretary, Committee on Survey and Occupation China Continuation Committee, Shanghai. The report of these gentlemen was presented at the annual conference of the China Medical Missionary Association which met at Peking on February 21st to 27th, 1920. We present herewith some of the points made in the report. The growing appreciation of medical science in China has led medical missionaries and their friends to consider whether or not the mission hospitals are adequately staffed and efficiently equipped for modern work. Twenty years ago the aim was to win the patients' confidence and friendship; in this endeavor it was inevitable to carry on under conditions opposed to hygiene, good nursing and without scientific methods of diagnosis and treatment. To-day even many of the Chinese wish a higher level of efficiency. To improve conditions it was decided to ascertain by questionnaire information as to the present conditions. Eighty-two per cent. of the hospitals replied; 200 out of some 250 institutions. Sixty-three of the hospitals reported on are one storey high; ninety-eight partly or wholly two storey; twenty-eight partly or wholly three storey; and seven partly or wholly four storey; more than eighty per cent. of the hospitals have been erected since 1900. Seventy-six were constructed between 1910-20. In the northern provinces and in Szechwan, the majority of the hospitals are built on an east-west axis; but in four other provinces the orientation is north-south. A slanting axis—N.E.-S.W.—is reported from eight. The total cost of the original buildings, 152 hospitals, was $3,259,650; and that of additional buildings to ninety-five hospitals was $1,637,580; while the total cost of equipment of 122 hospitals was $554,930. Only fifty-two hospitals out of 168

have out-patient departments fitted in accordance with modern aseptic ideas; only fifty-seven O. P. D.'s have any facilities for laboratory work. Fifty per cent. of the O. P. D.'s have no dark room for eye work; and fifty-two per cent. have too large a clinic for detailed examination of individual patients. Social service and follow-up work has been attempted in forty-six per cent. of the hospitals reporting. Fifty-six O. P. D.'s are placed in the general building; while sixty-eight have separate buildings. Fifty-two are fitted up aseptically; 116 not so fitted. Fifty-seven have laboratory facilities; 115 have none. There are operating rooms at Shansi and Kiangsu; without—chiefly Chekiang and Manchuria. One hundred and twenty-six hospitals receive both male and female patients—not, as a rule, in the same building. Thirty-three hospitals confine their work to men; thirty-six to women and children. Average number of patients in all hospitals, sixty-three; in men's hospitals, forty-six; in women's, thirty-one. In Fukien there is one bed to 9,210 people; in Yunnan one to 266,490. The average in China and Manchuria is estimated at one hospital bed for 26,640. Some American cities run one bed to some 300 people. The average number of beds per foreign or foreign-trained physician is forty-three. The majority of hospitals are built of burned brick; some of stone; others of mud brick. Chinese tiles are used for roofing in seventy-two per cent. of the hospitals reporting. Portland cement is used wholly or partly in fifty per cent. of the hospitals for ground flooring. The upper floors are mostly of wood. Eighteen per cent. have coved corners, fifty per cent. report rounded corners in operating rooms. In fifteen per cent. of the operating rooms walls are tiled. The ward walls are plastered or color washed for the most part, though in Chihli, twenty-six per cent. are painted and oiled. Eighty-two per cent. report sufficient ventilation. One hundred and seventy-five have glass windows; fifteen mostly glass; four paper windows throughout. Fifty-six per cent. of 110 reporting have less than 800 cubic feet of air space per patient. Twenty-eight have 800 to 1,200 cu. ft.; twenty have 1,200 cu. ft. or over. One hundred and twenty-three have adequate verandah space; sixty-six are

inadequately supplied. Sixty-eight have means of isolation; 127 have no means of isolating infectious cases. Eighty-seven are screened throughout against flies, mosquitoes; thirty-four supply nets for all patients; seventy-two are not protected by screens. Forty-five per cent. of 185 hospitals have iron beds; the rest have beds of wood or brick Kangs. Fifty per cent. of the hospitals provide all patients with bedding; ten most of the patients; twelve a few; twenty-four do not provide any. Chinese wadded quilts are supplied in eighty per cent. of the first category; blankets in forty-seven per cent., and sheets in forty-nine per cent. In more than half the hospitals reporting on the matter of change of patients' clothing, there are no facilities for providing clean garments or, at best, can do so for not more than a small minority of their patients.

In the early days of medical missionary work in China it was neither easy nor politic to induce patients to come into the hospital unless they were allowed to bring their friends in to live with them. To-day that necessity no longer exists in most places, but owing to the lack of nurses or orderlies, or to other causes, thirty-seven per cent. of 188 hospitals report that all patients still bring their own friends into the wards to stay with them. In a few hospitals (twenty-two) special accommodation outside of the hospital is provided for the friends.

A bare fifty per cent. of the hospitals are able to report that the patients' diet is wholly controlled by the medical and nursing staff. Hitherto, the kitchen in too many instances has been left to the mercies of the not-over-hygienic cook and to the capricious whims of the patient. Only sixty, out of 172, hospitals report a complete classified diet system. In fifty-eight, the kitchen is in main building; in 129 located in an outhouse. One hundred and seventy are under control of the hospital; thirteen not; sixty-five screened; 132 not. Eleven use foreign stoves; 173 Chinese stoves. About sixty-seven per cent. of the hospitals reporting are heated in winter—those not, are situated mostly in the south. Six have central hot water heating; fourteen steam; nine hot air; ninety-three separate stoves; four brick Kangs. Seventy-one have electric light; 115 oil; two partly with acetylene. Fifteen secure water from artesian wells;

134 from wells at the surface; forty use river water. Thirteen boil and filter the water; seventy-six boil only; twenty-five filter only; sixty do not treat the water at all. Eleven have running water in the institution; eighteen have it in the laundry and operating room and thirty-seven have hot water cisterns. Sixteen hospitals report the melancholy fact that they do not possess a bath tub; thirty-three have either a porcelain or enameled iron tub; sixteen have Soochow tubs; three cement; forty-seven galvanized iron; thirty-one wooden and twenty-two some miscellaneous improvisation. Seventy-four of the hospitals reporting bathe all patients on admission and 112 do not bathe all. In eighty-three, the patients are regularly bathed; in eighty-one, they are irregularly or never bathed. Thirty-three have running water for baths; 158 not. Fifty-seven per cent. of the hospitals have laundry accommodation sufficient for the work of the hospital; in twenty per cent. there is foreign machinery. One hundred and eighty-six hospitals depend on ordinary Chinese latrines; fifty-one report having water flush closets; thirty-one scattered in thirteen provinces, have septic tanks. Seventy-four per cent. of those using the latrines empty them daily. Eighty-three per cent. of the hospitals have a sufficient supply of bed pans and urinals. One hundred and eighteen hospitals have pressure sterilizers; 138 have facilities for sterilizing ward utensils; 145 sterilize surgical dressings, and fifty have provision for sterilizing bedding and mattresses. Fifty-five operating rooms have water sterilizers; forty make sterile water in boilers, and seventy-four in kettles. One hundred and one operating rooms are equipped with steel and enamel furniture; eighty-one wooden. One hundred and seventeen have an adequate supply of instruments and sixty-three have not. Twenty-one have electrical instruments of investigation; 159 have not. Of 197 hospitals, forty-seven per cent. have laboratories in regular use; sixty-one have no laboratories. Ninety-two have microscopes; eighteen a bacteriological incubator and twenty-four have a skilled technician. Of 170 hospitals sixty per cent. are able to make routine blood examinations. Sixty-six per cent. regularly examine the feces. Only twenty-four per cent. are able to examine sections of tumors.

Of 161 hospitals, only twenty-one have X-ray apparatus. Forty-one hospitals have special departments. Seventeen have a gynecological; fifteen ear, nose and throat; twelve eye; ten X-ray and one a dental. Twenty only, have adequate departmental equipment. One hundred and fifty-seven hospitals have one or no doctor; twenty-seven, two; six, three, and seven over three. Out of 177 hospitals only fourteen per cent. of the staff are able to specialize, being so busy in general work. One hundred and fifty-five hospitals have 284 Chinese medical assistants; forty-two have none. Nine have qualified pharmacists; 173 have not; 121 have student assistants or dressers; seventy-six have none. There are 4.8 student assistants in each hospital. In one-third of the hospitals there is no skilled nursing. Ninety-five hospitals reporting have skilled nurses. Ninety-three hospitals have foreign nurses, and ninety-four have Chinese graduates. Eighty-two hospitals have each an average of twelve undergraduate Chinese nurses. Thirty-four hospitals train both male and female nurses. In those hospitals where no nurses are employed, the care of the patients is necessarily left to the friends. Out of 197 hospitals, thirty-eight per cent. have no regular night nurses. Forty-two per cent. hospitals reporting keep full records; fifty-eight per cent. do not. Research work is being attempted in twenty-five out of 183 hospitals. Of 185, fifty-two report that their medical and surgical work is now based on pathological investigation. Eighty-eight autopsies were performed last year in thirty-two hospitals. Widal and Wassermann tests can be carried out in thirty-six, out of 197 hospitals. Major abdominal surgery is attempted in ninety-four out of 197 hospitals.

The control of seventy-five per cent. of 171 hospitals is in the hands of the medical and nursing staff. The others are run by committee. Fifty-four, out of 175, have a superintendent—a doctor usually. Foreign business managers are reported from twenty-one out of 160 hospitals. Thirty-eight hospitals are wholly self-supporting, apart from foreign salaries; fifty-two more than two-thirds supporting; twenty-two from one-half to two-thirds; nineteen from one-third to one-half; and nine less than one-third.

The total annual budget of 127 hospitals, inclusive of foreign help, last year was $1,649,604. Average amount from Chinese subscriptions, twenty-seven per cent.; patients' fees twenty-eight per cent.; foreign donations and fees, nineteen per cent.; home boards, twenty-six per cent.

A careful study of the facts contained in the preceding sections will make it abundantly clear that the appeals which medical missionaries are continually making for better equipment and larger staffs are not without strong foundation. If we but glance at the summarized statement which is given at the conclusion of this paper, we cannot fail to see that a large proportion of the hospitals are working under most severe handicaps, from the point of view of scientific methods; and if the supporters of medical missions are anxious, as we believe they are, to make the mission hospitals truly efficient, large reinforcements and greatly increased financial support will be required.

In answer to the question as to what each hospital regards as its most urgent need at the present time, the following facts have emerged:

One hundred and twenty-nine hospitals are appealing for two hundred and three more foreign doctors, the largest proportion of hospitals making such an appeal being in Shansi, Anhwei, and Chekiang, and the largest aggregate being called for from Kwangtung, Shantung, and Chihli.*

One hundred and fifteen hospitals are appealing for two hundred and five more qualified Chinese doctors, Szechwan, Anhwei, and Chekiang supplying the largest proportion of hospitals putting forward this need, while the largest aggregation is asked for from Shantung and Kiangsu. In this connection it is of interest to add that eighty-one of these hospitals are asking for internes from the medical colleges, and offering them a good service.

One hundred and thirteen hospitals are appealing for one hundred and forty-eight new foreign nurses, the largest proportion of hospitals making this appeal being from Szechwan, while

* This means that the total number of foreign physicians asked for is greatest from Kwangtung, Shantung, and Chihli, but that proportionately there are more hospitals in Shansi, Anhwei, and Chekiang than in the other provinces appealing for foreign doctors.

the largest total of nurses required for the whole province is for Chekiang, Shantung and Kiangsu.

Ninety-eight hospitals are appealing for four hundred and one new Chinese graduate nurses, the largest proportion of hospitals urging this need being in Chekiang and Anhwei, while the largest total of nurses is required for Fukien and Chihli.

Ninety-four hospitals are appealing for new or enlarged buildings at a total cost of Mex. $5,039,800. Kiangsu and Chekiang supply the greatest number of hospitals making this appeal, the largest amount of money for the whole province being asked for in Kwangtung and Kiangsu.

Ninety-one hospitals are appealing for new equipment, at a total cost of Mex. $862,300. The greatest amount of money for this purpose is appealed for from Kiangsu and Shantung, while the largest proportion of hospitals putting forward this need is in Szechwan, Kiangsu and Anhwei.

Sixty-seven hospitals are asking for increased appropriations from the home boards, amounting to a total of Mex. $383,300 per annum, this request coming chiefly from hospitals in Anhwei and Hunan, while the largest total sum of money is asked for by the hospitals in Kiangsu.

In conclusion, let us summarize the main facts upon which these appeals are based, and which this enquiry has revealed. They are as follows:

There is at present on an average only one mission hospital bed to every 26,640 people in China.

Eighty per cent. of the hospitals whose reports have been received state that they had only one foreign or foreign-trained doctor last year.

Thirty-four per cent. have no nurse, foreign or Chinese; fifty-two per cent. have no foreign nurses; and sixty per cent. not more than one graduate nurse in all.

Sixty-two per cent. have no regular system of night nursing.

Thirty-seven per cent. depend entirely on the patients' friends for all nursing.

Less than fifty per cent. have out-patient departments equipped for efficient medical work.

Fifty-six per cent. of the in-patient departments have less than eight hundred cubic feet air space per patient.

Sixty-five per cent. have no isolation block or courtyard.

Thirty-seven per cent. have no protection whatever against flies or mosquitoes; sixty-seven per cent. have no screening for their kitchens, and seventy-one per cent. have no screening for the latrines.

Thirty-seven per cent. possess no bedding, or only sufficient for a very few patients.

Fifty-eight per cent. are unable to clothe the patients in clean hospital garments.

Only eight per cent. have a pure water supply, and only six per cent. have running water laid on throughout the hospital.

Fifty per cent. seldom or never bathe their patients.

Forty-three per cent. have no laundries, or insufficient accommodation for dealing with the hospital linen, etc.

Fifty per cent. have no controlled diets for the patients.

Thirty-four per cent. do not possess a pressure sterilizer for surgical dressings.

Seventy-three per cent. have no means of sterilizing bedding or mattresses.

Thirty-one per cent. do not possess a laboratory of any kind.

Eighty-two per cent. do not possess a bacteriological incubator.

Eighty-seven per cent. do not possess an X-ray plant.

Seventy-two per cent. state that they are unable to base their medical and surgical work upon pathological investigation.

NOTE.—It must be remembered that the above percentages are in every case calculated upon the number of hospitals who have filled in the return—usually 180 or 190—and not upon the total number of mission hospitals in China.

Society Proceedings

THE ONTARIO MEDICAL ASSOCIATION

The fortieth meeting of this Association has passed into history. It was a very important meeting. The Committee on General Purposes did a lot of work during the year at a good deal of self-sacrifice. Their work was ratified by the Association, and the reports of the committees were also adopted. The address of President Marlow was remarkably good and most comprehensive. We only wish we had the space to reproduce it; but it will doubtless appear *in extenso* in the *Canadian Medical Monthly* and has already been reported at some length in the daily press. The address was delivered in the theatre of Hart House, subsequent to the annual dinner, a function which was enjoyed by one and all.

The action of the Association with reference to the dispensing of liquor was praiseworthy. As pointed out, the only way to procure liquor is first to procure a doctor's order. So the people come to the doctor. Many secure their "script," but many have to be refused, and they vent their spleen in part on the poor doctor. The Association, quite properly, directs the Commissioners' attention to those who have the habit of securing prescriptions from more than one doctor. Remedies suggested: (1) doctors should refuse to write prescriptions for vendors to fill—only for druggists; (2) to issue as many orders as they see fit, if for medicinal purposes solely; (3) to discontinue the present system and substitute licenses to purchasers for a limited amount from time to time, holding purchasers strictly accountable for the use to which the liquor may be put. With regard to the Board's request to vendors to refuse to honor prescriptions from doctors prescribing over 100 per month, the Association

thinks there should be no arbitrary refusal, as practices vary so much in size, and the poor, unlike the rich, not being able to lay in a stock, may suffer. The older practitioners have many old and chronic cases and should be able to issue as many prescriptions as they deem necessary. Further, the Association requests that the profession should be represented on the Board, if the present system continues. Strong objection is rightly taken to the legislation which lays upon the profession the responsibility of furnishing people with orders for liquor and at the same time permits the sending of detectives to doctors' offices with a view of bringing them into court.

Dr. George Stewart, Professor of Surgery, Bellevue, New York, gave a unique and powerful address. It was full of fire and "veera metapheezical." The auditor wondered what the first half of his address had to do with his topic—the teaching of surgery. Its allusions to ethics, sociology, theology, classics and politics, proved that Dr. Stewart, like our own revered Professor of Surgery in Toronto University, knows a deal more than how to operate, and that his reading embraces infinitely more than what is written in the text-books on surgery. He opened his address which glowed with Celtic fire by saying that he was a Canadian (a bluenose), and that he was brought up on oatmeal and the Word of God. Mr. I. H., Cameron, in the absence of the speaker chosen to discuss the paper, was called on by President Marlow to "say a few words," and delivered one of his characteristic and happy impromptu speeches—one of the most charming we have ever had the pleasure of hearing. He attributed Professor Stewart's splendid paper and his admirable scheme of teaching surgery to the fact that he was Canadian-born—more particularly in New Scotia—originally a part of *Scotia antiqua*, and that he was reared on porridge and the Word of God, but more especially because he possessed the grace of God in his heart, in spite of the evil influences that have for so many years surrounded him in Gotham. Prof. Cameron (if permitted) proposes establishing in Toronto University Medical College the system outlined by the essayist—a fine tribute to Professor Stewart.

Thos. Cullen, of Baltimore, was warmly received. He is

a favorite in Toronto, and his old pals were proud to hear him speak and show his pictures, explaining and illustrating the growth of adeno—myomata of the uterus. He has discovered these abnormal growths in the various uterine ligaments, in the rectus muscle, and more particularly in the recto-uterine pouch. He has done pioneer work in the pathology of this disease and has been very successful in the removal of these growths. As he riveted the attention of the medical men filling the amphitheatre on his topic, his wide open eye detected the entrance of an old friend to whom he accorded a smile of recognition, and more than once made a courteous reference to one of his old teachers or one of his Hopkins students present.

An important report submitted was that on Mental Hygiene, by Dr. Helen MacMurchy. The report advocates the teaching of this subject to both undergraduates and graduates. A section of the Association might be devoted to it. The foundations of Mental Hygiene must take cognizance of each individual at birth. Twenty-two hours' sleep, four hourly feedings, a happy, loving, serene, sensible, self-controlled mother who understands the profession of motherhood and home-making, form a basis for further development. The baby should not be left alone too much and should not be frightened. Growing children should never be excited or overwhelmed by the powers of a grown person; they should, however, be allowed to struggle with their own little difficulties—to do things—nature's way of making them strong in mind and body. The teaching of self-control was all important; moods, passions and tempers can usually be averted. Obedience is also absolutely essential. The first principle of mental hygiene is the formation of good mental habits and a fine character and personality in childhood. A normal nervous system is one that is equal to the difficulties of life. Heredity and stress are the two causes of mental disorders. Every effort should be made to educate the public on the subject of parenthood. Waller's experiment goes to show that, perhaps, stress of mental emotion may produce insanity, just as surely as toxic conditions do. Whether we look upon the nervous system as the instrument of the spirit, or the intellect subject of mechanistic forces, we have

discovered which way madness lies and should turn from it. The report then proceeded to point out steps being taken by various governments to cope with lunacy, feeble-mindedness, and allied conditions. Tribute was paid to the good work done by the various voluntary and government agencies already in the field. But the time was at hand when better care and treatment should be accorded patients in mental hospitals. More and better trained medical officers and nurses are required. Out-door clinics should be established, and after-care of patients discharged from mental hospitals was of great importance.

Mention must be made of the delightful receptions of President and Mrs. Marlow and of Mrs. Walter Massey, which were much enjoyed by all.

Dr. Stanley Ryerson read a paper on the Relation of Pathological Conditions of the Gall Bladder to Treatment. The essayist discussed the inflammatory and other abnormal conditions affecting the biliary tract. The acute inflammations of the gall bladder have a tendency to recur and may become chronic. The chronic may vary in degree and extent, like the acute, and may cover a period of years, and may affect the biliary tract. The condition may give reflex symptoms and result in the formation of gall stones by precipitation of the solids in the bile and by absorption of its fluid portion. The swelling of the mucous membrane will increase the difficulty of the gall bladder emptying itself. The periodicity of the disease is shown by the alternation of cholesterin and bile salts in the concretions. Carcinoma was often associated with gall stones, but may not affect the bile unless it occludes the ducts. In treatment, means should be devised to allow the bile to reach the intestines. If there is no obstruction, present steps should be taken to relieve the symptoms. If due to inflammatory swelling palliative treatment is all that is necessary. If gall stones are present operative measures will be necessary for their removal, whether in the viscus, in the duct or in the ampulla. After their removal, drainage was very essential, and this carried on for a period of three weeks to three months, through the gall bladder wall if not removed, through the common duct if it is;

drainage may be carried out by means of anastomosis between the gall bladder and the gut.

Should the gall bladder be removed? Good health can be enjoyed, though this organ be absent. Certain animals have no gall bladder; it contains only about one-fortieth or one-fiftieth of the twenty-four hours bile. Does the gall bladder show indications that it has not been functioning normally? Is its wall thin and dilated or is it small and thickened? Are gall stones present and is the viscus adherent to surrounding structures? Or has drainage been tried and found unsuccessful? In such conditions cholecystectomy is indicated.

In discussion, Dr. George Bingham said that there was no doubt the gall bladder has an important function to perform. It may be an accessory organ but should not be removed unnecessarily. It was a reservoir of certain salts; it is a secretory organ of certain materials mingled with the bile. Its particular function was the regulation of the bile flow. Where this organ is missing there is little or no resistance to the outflow of bile. Where the gall bladder is normal the resistance to the outflow of bile is increased at least three times as much as where it is absent. The justification for cholecystectomy is based (1) on signs and symptoms pointing in the direction of abnormal conditions of biliary tract; and (2) on pathological conditions demonstrable to the eye and the finger of the operator. Clinical symptoms were insufficient—our experience in the past with diseased ovaries and gastric ulcer proved that. So cholecystectomy should not be chosen in all cases of disturbance of the biliary tract. In early cases of infection of the gall bladder where no serious change has taken place within the wall of the viscus this procedure was not indicated. Frequently there was a primary focus of disease somewhere else which, if removed, will tend to complete restoration of the normal healthy gall bladder—a diseased appendix for instance. In some of these cases drainage of the gall bladder is indicated as an additional measure. There was no rule of thumb applicable to these cases. Many cases of simple chronic cholelithiasis without gall stones have improved and been cured by cholecystectomy. Where, on the other hand, exposure of the gall bladder

gives evidence of pathological changes we should not hesitate to remove the gall bladder.

In the second group of cases—chronic cholecystitis accompanied by evidence of the presence of gall stones within the gall bladder, the actual presence of the calculi is evidence that probably more damage has been done to the gall bladder wall than in the former class of cases. So excision of the gall bladder is called for. In some cases pathological conditions may be present, not to be demonstrated to the eye or finger. When in doubt the radical operation should be performed. In a third type of case there is a typical cholangitis with chills and fever—with gall stones in the common duct. The disease runs in cycles. The stones have already done damage to the bladder; so the proper procedure is cholecystectomy and removal of the stone or stones in the common duct.

Dr. Charles F. Martin, professor of clinical medicine, McGill University, Montreal, took as his subject the relation of psychiatry to medical practice. Dr. Martin said that the profession had neglected in the past to deal in an intelligent way with those suffering from mental abnormality. He urged the medical men present to depart from ancient traditions and prejudices. They should learn to look on patients with mental disturbances as something apart from madhouse inmates and should be done with the era of straw and chains, and patients with all forms of mental disease be as carefully considered and treated as those with disease of any other organ.

Dr. Martin deprecated the present method of instructing medical students in psychiatry. He said that it is now being taught very much in the same way that one might teach navigation, by inspecting a few wrecks; or engineering, by viewing a few broken down dynamos—and all this, too, in spite of the fact that there are in public institutions more insane patients than of all other diseases put together.

Dr. Martin concluded by the following statement: "We must treat patients early and treat early cases; we must recognize the importance of treatment out of asylums; of forming psychopathic hospitals or pavilions in general hospitals, where, till now, such cases have always been unwelcome guests.

Dr. Chas. H. Hair, presented the report of the Committee on Venereal Problems, as follows:—

Mr. President and Members:—

Your Committee request that the following resolution be presented at the Annual Meeting:

"Be it resolved that this Association put itself on record as endorsing the action of the Provincial Board of Health in its appreciation of the seriousness of Venereal Diseases, and in its programme in combating and treating these diseases. This said programme includes:

1. Establishment of clinics for diagnosis and treatment in various centres.
2. General education of the public through the distribution of literature and the active co-operation of the Canadian National Council for Combating Venereal Diseases, which constitutes the voluntary part of the Government's plan throughout Canada.
3. Furthermore, the Association pledges itself to co-operate to the fullest extent in order that this programme may be effectively carried out."

Provided such resolution is carried, your Committee further request that the necessary steps be taken in order to place this resolution in the hands of the proper authorities.

Use and Abuse of Purgatives.

This was the title of a paper by J. W. Crane, of London. The essayist held that there is a healthy skepticism abroad as to the real existence of autointoxication and ptomaine poisoning, hence the lessening enthusiasm for purgatives. Constipation due to stasis largely in colon with nothing abnormal in small intestine, hence use of enemas rather than purgatives. Calomel is not a cholagogue. Green stools not the result of increased secretion of bile, but a green compound of mercury. Mercury usually found in urine after ordinary doses, hence is contraindicated in nephritis. Magnesium Sulphate if absorbed is very toxic, hence do not give it if any interference with emptying the bowel.

Diverticulitis of the Large Bowel.

Dr. Jas. C. Masson, of the Mayo Clinic, read a paper thus entitled. He says:—

Diverticula of the bowel are of two kinds: True diverticula in which all structures of the bowel wall are represented, and false or acquired diverticula, in which the muscular wall is lacking, at least in part. False diverticula or mucosal hernias are found more commonly in large bowel than is generally realized. In some cases they give rise to few or no symptoms; in other cases they produce alarming and often fatal sequelae. The condition is frequently confused with malignancy, even at the present time.

Two hundred and fifteen patients with diverticulitis of the large bowel have been treated at the Mayo Clinic since 1904; 112 were operated on; 103 were not operated on. Diverticula were also found in the wall of the appendix in seventy-three patients operated on for appendicitis. Few of the patients were less than thirty years of age. There were twice as many men as women. Their general condition was good unless obstruction had occurred. The symptomatology and sequelae were very similar to those in appendicitis. In fourteen cases carcinoma was secondary to diverticulitis. The sigmoid was involved more frequently than any other part of the bowel.

Roentgen-ray diagnosis of intestinal diverticulitis is practically proof positive of the disease. Before the introduction of the roentgen-ray, in 1914, as an aid to diagnosis, relatively few cases were recognized before operation or necropsy. Many patients with numerous pouches live until old age and have little or no inconvenience by keeping the stool fluid. The surgical treatment varies from simple amputation of a single saccule to very extensive resection of the bowel.

Dr. D. E. Robertson dealt with the subject of the treatment of non-union—bones ununited at the end of four months will not develop a boney union. A dense fibrous union is not sufficient to allow of function in a weight carrying bone. When non-unions are submitted to operation they must either have a bone grafting operation done or a mortising operation. Success

in these operations depends entirely upon the amount of raw bone opposed to raw bone and absolute internal fixation. Description of different types of grafts for various bones. Lantern slides offer cases before and after operation.

Pregnancy and the Tuberculous Woman.

Dr. Jabez Elliott discussed this subject. The essayist believes:—

1. Tuberculosis of the lung exerts practically no influence against conception.

2. It seems to exert little influence on the course of pregnancy and unless the patient is in a far advanced stage of the disease has little or no tendency to cause abortion, miscarriage or premature labor.

3. Pregnancy may prove a dangerous complication in tuberculosis of the lung, especially if the disease be active.

4. A woman with active tubercle of the lung should not marry.

5. A tuberculous woman should not become pregnant unless her lesion is limited and active signs have been absent for at least two years.

6. There are no rules we can follow which will aid us to determine with certainty which cases will bear the added strain of pregnancy well and which badly. It is equally difficult to determine in what cases an abortion will improve the future prospect of the pregnant woman. As in all forms of treatment of tuberculosis we must individualize; all rules fail.

7. Intervention after the fifth month rarely gives satisfactory results. Prior to the fourth month, it is possible that the mother's future may be improved by emptying the uterus through the modern operation of vaginal hysterotomy under gas, ether and anesthesia, that is by avoiding shock incident to a prolonged operation or ordinary anesthesia or loss of blood.

8. Labor should be made as easy as possible. The induction of premature labor two weeks before term may be advisable.

9. The tuberculous mother must not nurse her child.

10. The ordinary hygienic and dietetic treatment of tuberculosis must be strictly observed during pregnancy and the puerperium for at least six months after all evidence of pulmonary activity has subsided. The obstetrician and the interneist should work in closest co-operation.

11. A pregnant woman giving a history at all suggestive of pulmonary tuberculosis should be subjected to a thorough examination by a competent interneist at the earliest possible date. Only in this way can the proper treatment be instituted at the time when it is most valuable.

(To be concluded in our August issue.)

Personals

DR. C. H. CRUICKSHANK IS RECOMMENDED AS HEAD OF CITY LABORATORIES

The Board of Health, Toronto, at its meeting on May 12th, passed the recommendation of the M.O.H., that Dr. H. C. Cruickshank, a returned soldier, who is at present assistant to Prof. Fitzgerald at the Connaught Laboratories, be appointed head of the city's laboratories in place of Dr. Grant Fleming, who has resigned.

SIR WILLIAM OSLER'S BEQUESTS TO McGILL AND OXFORD

The estate of Sir William Osler has been probated at £11,650. The will was made December, 1919, and leaves his medical and scientific library to McGill University. The residue goes to his widow, and on her death his residence is devoted to Christ Church College, Oxford, as a residence for the Regius Professor of Medicine.

Dr. A. W. H. Caulfield, of 13 Spadina Road, Toronto, wishes to announce to the profession that in future he will confine his practice to office appointments, outside consultation, and attendance upon acute and chronic pulmonary diseases.

To correlate with this, his work in the research division of the Connaught Antitoxin Laboratories, University of Toronto, will deal with the investigation of the problems of immunity and sensitization presented by acute and chronic lesions of the respiratory system, such as the pneumonias, tuberculosis, bronchitis, asthma and hay fever.

Dr. J. T. Fotheringham, 20 Wellesley Street, Toronto, has resumed practice as consultant physician.

Obituary

DR. JAMES ANDERSON'S DEATH

Dr. James Anderson, one of Hamilton's best-known physicians, died at the Mayo Hospital, Rochester, Minn., on May 7th. He had undergone an operation for cancer of the throat. He was a native of Ireland and came to Canada when quite young. After graduating in medicine at the University of Toronto he became Assistant Medical Superintendent of the City Hospital when Dr. O'Reilly, who died a few days ago in Toronto, was Superintendent. He afterwards took a post-graduate course in the London Royal College of Physicians, and on the completion of his course began practice in Hamilton.

DEATH OF DR. ALLAN GORDON RICE

Dr. A. G. Rice, one of Toronto's well-known physicians, died at his residence, 114 South Drive, on the evening of May 20th. Dr. Rice was widely known throughout Ontario as Divisional Surgeon to the Grand Trunk Railway, having succeeded to that position on the death of Dr. Bruce Riordan.

DEATH OF DR. THOMAS McKENZIE

The death occurred on June 2nd of one of Toronto's best known west-end practitioners, Dr. Thomas McKenzie, of O'Hara Avenue. The late Dr. McKenzie began practice on O'Hara Avenue thirty-five years ago and during that period acquired a host of friends, outside of his many patients. He was a member of the Academy of Medicine and the Ontario and Canadian Medical Associations. Dr. McKenzie, during his whole lifetime was keenly interested in natural history and was accredited one of Canada's best ornithologists

COMMERCIAL DEPARTMENT

SALICYLATES BY INUNCTION IN RHEUMATISM

In rheumatism and allied conditions there is a perversion of the normal body chemistry, which, under effective elimination of auto-toxins and moderate stimulation of sluggish functions, generally rights itself, particularly when reasonable care is given to regulation of the diet, both as to kind and quantity of foods allowed.

For the associated pain of rheumatism, we have in sodium salicylate and acetyl salicylic acid drugs of tried and proven worth, which it would not be easy to replace. But sodii salicylass is not always tolerated by the stomach, soluble and readily absorbable thought it be, and there are grave cardiac cases where even acetyl salicylic acid must be used sparingly. When taken into the organism, sodium salicylate is believed to cause the elimination of the excess of uric acid circulating in the blood and other body fluids or deposited locally, thereby relieving the economy of a principal factor in its state of derangement and permitting of gradual improvement in the patient's condition. Methyl salicylate when applied in proper dilution to the skin, is absorbed, taken up by the blood, and combining with its sodium salts, converted into sodium salicylate.

Several vehicles have been employed for the conveyance of methyl salicylate to be given via the skin; physicians are familiar with these and rightly esteem them.

Possibly the most effective is Iodex, because of the unique absorbability and deep penetrative power of its base, and the unquestionable advantage of the iodine association obtained.

Iodex c Methyl Salicyl. has proved in clinical use to be a superior local analgesic and anti-rheumatic.

One-half drachm is smeared on the skin and rubbed with the hand until its black color completely disappears. This should be repeated three or four times a day. The inunction may be

made at or near the seat of pain or at any point that is vascular and well supplied with absorbent tissue.

An alternative method of employing this absorptive and analgesic agent in cases where there is much tenderness is to gently smear it upon the affected part and cover with lint and oiled silk.

Methyl Salicylate is contra-indicated where the skin is broken and upon mucous surfaces generally as it may cause intense irritation in such foci.

OVALTINE

It is now generally accepted as a result of considerable research that protein, fat and carbohydrate are regarded as essential elements of food, and to satisfactorily repair waste and supply energy are best presented in approximately the following proportion—*Protein,* 17.51 per cent.; *fat,* 8.31 per cent.; *Carbohydrate,* 74.18 per cent. "Ovaltine"—a combination of diastasic malt extract, milk, eggs and a cocoa flavoring—is a natural tonic food preparation, presenting a high concentration of these nutritive substances. Excluding moisture, mineral salts, etc., and taking the three proximate principles alone as they occur in "Ovaltine," calculating them out in relative percentage proportion of each other, we get—*Protein,* 15.5 per cent.; *fat,* 8.7 per cent.; *Carbohydrate,* 75.8 per cent. These practical figures accord sufficiently closely to the theoretical conclusions of advanced research to justify the claim that in "Ovaltine" itself all the elements necessary for the maintenance of life are present in just and adequate proportions.

"Ovaltine" contains its carbohydrate entirely in the form of readily absorbed and assimilated malt and milk sugar; the proteins have undergone that initial change by the action of malt diastase which materially assists in their subsequent digestion, while the fat reproduces in the beverage the natural fine emulsion of the milk used in its manufacture.

CASCARA IN CONSTIPATION

Cascara sagrada is unique. There is a distinct advantage in using it in the treatment of chronic constipation. For example, it stimulates the muscular structure of the intestine, thus promoting normal peristalsis. It activates the intestinal follicles, thus augmenting glandular secretion. Moreover, this stimulating effect is mild, not excessive. It approximates the work of nature and is, therefore, not harmful or retroactive.

The original bitter fluid extract, introduced by Parke, Davis & Co. in 1877, is the preferred preparation in most cases, because of its well-known bitter-tonic effect. It is given in doses of five to thirty drops, according to the condition to be met, and this dose may be continued for several weeks in chronic cases. In more obstinate cases the initial dose should be increased gradually until the desired result is attained. At this point a progressive tapering-off system of dosage is adopted, rather than an abrupt cessation of the treatment.

For patients who cannot or will not take the bitter medicine, Cascara Evacuant is recommended. This is a palatable extract from which the bitter principle of the drug has been removed.

NEEDED IN MODERN LIFE

Smoking among women is becoming much more prevalent and an indication of it was noticed at a recent banquet in Ottawa at which ladies were present. Some of the men hesitated to begin smoking; but one of the ladies produced a cigarette and the men quickly followed suit when she lit up. A woman's right to smoke is just as logical as her right to vote and the old prejudice is fast disappearing. The cigarette is indispensable in modern life.

AN IDEAL RESORT FOR CONVALESCENT PATIENTS

Physicians have frequent opportunities of referring those convalescing from illness to a resort where they can quickly recover their old-time vigor and enjoy an almost ideal climate, 2,500 feet above sea level. Such a resort is Virginia Hot Springs, just one night out of New York. The management have spent a huge sum of money on this choice spot in "Old Virginny," and are anxious that the Canadian medical profession should continue to refer cases there, as they have done in years gone by. The Homestead Hotel is one of the handsomest houses in America. It is built of solid brick, containing 500 guest rooms, with many parlor suites and 300 private baths. It is spacious, dignified, quiet and restful, with magnificent mountain views on every side. It is no exaggeration to say that Hot Springs means the Homestead Hotel. The Company owns 5,000 acres surrounding the hotel, so that physicians can understand that their patients have every opportunity of enjoying outdoor life and regaining thereby their normal strength.

The dominant factor making Hot Springs world-famous is the cure in which the climate as well as the water assist. The waters are conducted by gravity to the bathhouse and distributed fresh from the ground to the bathing apartments on different floors without loss of heat or its increase by artificial means, and fully charged with all their gases and other health-giving qualities. At none of the celebrated places in Europe, and at no other springs in America, is the temperature prescribed for hot baths that at which the water actually emerges from the earth in the natural springs.

The springs are beneficial, not only for bathing, but for drinking. Besides the hot springs, the effects of which as drinking waters are pronounced, there are magnesia, sulphur, and soda springs within the grounds, and alum water from a spring not far distant. The water from the soda spring comes strong and clear from the ground at a uniform temperature of 74 degrees. Physicians should address for full information Christian S. Andersen, Esq.

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Editorials

MENTAL HEALING

MEDICAL practitioners are frequently asked by their friends and patients what they think of Christian Science, faith cures, Osteopathy, Chiropractic and other forms of Therapy outside of their own particular domain. It occurred to the Editors of this journal as being desirable to secure from certain well-known men in the profession their views on "Mental Healing," and we refer our readers to the correspondence column of this issue. The time has come, we think, for the profession to pronounce definitely on this subject. There cannot be so much smoke without some flame. There may be an immense amount of "fake" connected with much of the so-called Faith cure, but is there not some virtue? We believe there is.

In the matter of divine healing, there is no ques-

tion that such a gift was in the possession of the apostles and members of the early Christian faith, and all down through the ages the Roman Catholic Church has had its shrines and agencies for "healing" through the interposition of certain saints. To-day, it is alleged that cases of cure are performed miraculously at Ste. Anne and at Lourdes.

The medical profession, we think, as a whole do not altogether dispute these cures, but consider them as connected with functional diseases only. They are not by any means convinced that patients suffering from diseases of an organic nature have been the subjects of such cures.

It seems to us that it would be a proper and most instructive procedure for the medical profession to carefully and seriously investigate these alleged cures. We have been told that at Lourdes a panel of physicians does examine patients presenting themselves for healing. Why might not this be done in such missions as those conducted by Mr. Hickson, who recently visited Toronto. Each patient who comes for healing presents a card with the diagnosis written down. This information, in most instances, no doubt, could be obtained from the family physician who had the case in charge. Our own Medical Council might investigate and learn in how far the diagnosis was positive or tentative; and to what degree, if any, a cure was effected. Indeed, the committee under the auspices of which Mr. Hickson worked are, we understand, seeking

results—doubtless depending on the patient's own statement. The medical commission would seek a physician's report on the cure.

RAILROAD SANITATION

Now that the Government has taken over so much railroad and established a Federal Health department, we hope something will be done to lessen the public's danger to contagious disease, while this may be done by insisting that medical men shall not allow tuberculous patients or carriers of typhoid, or diphtheria, or other infectious disease from under their care nor permit them to travel, without informing them what precautions ought to be taken in order that they may not be a menace to their fellow-passengers.

The railroads should be forced to adopt closet bowls in which disinfecting solutions may be held long enough in contact with the excreta, so as to thoroughly disinfect it before it is swilled along the track. It would be better to collect same at every divisional point, say, instead of littering it over the ties.

Thousands of tuberculous patients will soon be awaiting transport South or to California. What provisions do the roads make to keep their pullmans from becoming infected and for protecting the other travellers? Little or nothing, we believe. Another condition strongly calls for attention, the heating and ventilating of the day coaches. These hot boxes, crowded often with seventy people, are veritable

microbe incubators. They are usually too hot or too cold—sometimes both at once for certain fussy passengers. The side of the seats next the steam pipes is —usually, we find—often unbearably hot and smudgy; and into this inferno people sick and well are packed. Surely there is some remedy for such an unwholesome condition. Often, too, we notice the toilet closet in a filthy state. Some of these malconditions are easily remedied by the use of hot water, soap and elbow grease. The heating and ventilating problems require study.

THE BIRTH RATE

Our profession ought to take a live interest in *post bellum* problems, particularly in the matter of increased population by the production of more and better babies.

Jordan, ex-president of Leland Stanford University, says the decay of such ancient civilizations as Greece, Rome, Babylon, etc., was due to the loss by war of the young, strong, able-bodied men—the fit male procreators. He did not add what is commonly said to be the cause—the prevalence of luxury and vice.

At any rate, in spite of the frightful mortality of the flower of our manhood, there will be great rivalry among the nations in the production of a newer and better race than has been.

Too often are we medical men consulted by young, vigorous, selfish, pleasure-loving women as to how they can be relieved of the fruit of the womb; and

too often to attend the poor, hard-working woman, the mother of more children than she and her husband can support, who has taken an abortofacient or used an instrument to prevent the maturing of a probable hearty child, who would be a genuine asset to the State!

Often the poor husband is working for some rich manufacturer or corporation at a wage insufficient to keep his growing family.

These good middle-class people, if of healthy stock, ought to be encouraged in their efforts to multiply and replenish the earth; and to this end ought to receive better pay, state aid and remission of taxes to a great extent.

The wealthier and better educated classes, who can easily afford it, ought to set the fashion of producing larger families. It is a lamentable commentary on the higher education in the United States that college-bred men and women are not procreating as they should. We daresay the same applies to an extent in Canada. The poorer and middle classes ought to be encouraged to marry and receive compensation enough to live in decent homes in decent, healthful surroundings, where the rearing of a family will be a joy instead of, as at present, a great hardship.

Our social and economic conditions are largely at fault, and we doctors ought to be apostles of the doctrine of a fair chance for all—a more even division of the profits—not eighty per cent. to the hog and other barons and starvation for the people who do the work and earn the money.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

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Original Contributions

SUPRAPUBIC PROSTATECTOMY IN TWO STAGES*

By Herbert A. Bruce, M.D., F.R.C.S.
Col. R.A.M.C. and C.A.M.C., Asso. Professor Clinical Surgery, University of Toronto, Surgeon to Toronto General Hospital.

This method is the only one that I will discuss, because it is the one that I have practised almost exclusively for many years. Suprapubic Prostatectomy, which was devised by Freyer in 1901, is now practically universally employed in Europe as the most satisfactory method of operating. In America, for many years, the perineal route was in favor, largely in consequence of the teaching and excellent technique perfected by Dr. Hugh Young, of Baltimore; but, within the last few years most surgeons throughout America have been adopting the suprapubic route so that now Dr. Young is almost the only surgeon in America who still employs the perineal route.

The majority of patients, of course, are old men, from sixty-five years onwards. Their health is broken down by loss of sleep and urinary sepsis and deficient elimination. The results obtained in these unhappy individuals are simply wonderful. There are no patients upon whom one operates who are more grateful for the relief obtained than those afflicted with the distressing symptoms attendant upon an enlarged prostate.

It must be considered, however, as a serious operation, with three immediate dangers—shock, hemorrhage and uremia. One must always bear in mind the feeble resistance of these aged patients and the methods adopted should be carried out with the utmost speed, taking care that the patient is kept comfort-

*Read before the Academy of Medicine, Toronto.

ably warm and combating shock by an interstitial saline. I am in the habit of operating upon an electrically heated table in a warm room with the patient's legs and chest well covered.

Chronic bronchitis is a serious complication which makes it necessary to use either spinal anesthesia or gas and oxygen. I have used the latter successfully in all of these cases, and I consider it the anesthetic of choice.

A diseased condition of the kidneys is another serious complication of perhaps greater importance than chronic bronchitis. If the patient has been on a catheter life for some time he is likely to be suffering from urinary septicemia due to urinary obstruction and renal infection. Even in these cases I have several times operated successfully by the two stage method; the first stage consisting usually of a suprapubic cystotomy and the tying in of a tube, and the second stage the removal of the prostate, two or three weeks later. In many cases, however, the first stage, under local anesthesia, consists only of puncturing the bladder with a trocar and cannula permitting the passage of a small, soft catheter, which provides for drainage and enables one to wash out the bladder. In one of the cases reported there were large diverticulae of the bladder containing a number of vesical calculi which were removed at the first stage. This bladder was very septic, the diverticulae forming cul-de-sacs for the retention of pus. This patient subsequently developed a septic orchitis which necessitated orchidectomy. Although seventy-six years old, extremely emaciated, with a bed sore and in a most miserable, helpless condition from loss of sleep and pain and difficulty in urination, he made a perfectly good recovery and left the hospital at the end of six weeks. I received a letter from his son yesterday, telling me that his father had just returned from a two weeks' visit in the country to some friends, and is now back at work (three months after operation), and while expressing gratitude for my services, stated that if his father had known of the intended removal of one of his testicles, he would not have given his consent, but, even in spite of this, he was very grateful.

I should like here to emphasize the importance of advising prostatectomy as soon as a large prostate is discovered and not

waiting until there is residual urine and a septic bladder, which soon reduce the patient from pain and loss of sleep.

Preliminary preparation for the operation. Treat any condition such as bronchitis, chronic cystitis, etc., from which the patient is suffering. He is then given five grains of urotropine with ten grains of acid soda-phosphate two or three times a day for a couple of weeks before the operation.

The functional activity of the kidneys should be ascertained by taking all the evidence which can be collected.

The patient's general condition gives us the most correct idea of how much waste product is being retained in the different systems. The reaction of the living tissue cells to the waste products retained in poor renal function gives a chain of symptoms which force themselves upon the observer. These symptoms may be verified by the various laboratory tests which give us kidney function in terms of percentages and which should not be accepted without the symptoms.

The Phthalein Test—The value of this test in which 1 c. c. of a solution of Phenolsulphonephthalein (6 mgs.) is injected subcutaneously and its excretion in the urine examined as to the time of appearance and amount excreted in each of two hours, lies mostly in the verification of the improvement of kidney function in those cases which are undergoing preparatory treatment. After the subcutaneous injection of 1 c. c. of sterile solution containing 6 mgs. of Phenolsulphonephthalein the time of commencement of excretion in the urine is noted and should be five to eleven minutes. The urine is then collected separately each hour for two consecutive hours and the amount of dye excreted in each hour estimated. In the first hour the excretion should be forty per cent. to sixty per cent., and in the second twenty per cent. to twenty-five per cent. It is safe to say that a case presenting only fifty per cent. excretion in two hours and a delayed time of appearance (15 min.) should be put on preparatory treatment. When preparatory treatment fails to bring the excretion above twenty per cent. the case is considered to be a poor operative risk. In bad cases where the preparatory treatment extends over four to six weeks the phthalein test should be done at intervals of four to five days.

The Blood Urea Test—Done with the technic of Marshall or Van Slyke is a good indication of the amount of urea in the blood. It may be done in conjunction with the phthalein test and the results taken in verification of the symptoms.

In a case of chronic or acute distension of the bladder, the bladder should be emptied slowly, on account of the danger of its resulting in hemorrhage or uremia.

Suprapubic Prostatectomy.

Before the patient is taken from his room a catheter should be passed, the bladder emptied and washed out with boric solution and the catheter left in situ. This saves time in the operating room. Under a local anesthetic, one per cent. novocaine, the bladder is filled with ten to twelve ounces of warm boracic solution. A two inch median suprapubic incision is then made and the bladder opened, taking care to avoid large blood vessels. Explore the bladder with the finger and if calculi are present remove them, and fix a small rubber tube into the opening allowing it to project about one inch into the bladder. Close the rest of the wound. This completes the first operation.

Two or three weeks later, depending upon the patient's condition, the second stage of the operation is undertaken. A hypodermic of morphia gr. ¼, atropine gr. 1/150, is given one-half hour before the operation, which will be done under local anesthesia combined with gas and oxygen. The opening used for drainage is slightly dilated with the finger and enlarged if necessary. The gloved index finger of the right hand is placed in the rectum and the gloved index finger of the left hand placed in the bladder. This finger is then passed into the prostatic urethra and easily tears through the mucous membrane along the floor or lateral wall, and the prostate is shelled out usually with considerable ease. The gloved finger does the work quite well except where the prostate is adherent. At the base of the intravesical portion of the prostate the finger passes within the circle of the vesical sphincter, between the enlarged prostate and its sheath. The finger in the rectum pushing up on the prostate enables one to remove the lower ends of each

lobe usually without much difficulty, except in very fat patients. As soon as the prostate is removed a copious stream of hot boracic solution is run through the catheter into the bladder, and the bladder washed out. A large rubber tube, one inch in diameter, with a lateral opening is now introduced into the bladder, to the extent of one inch, and the wound in the bladder wall is closed firmly around this by one or two catgut sutures. A small rubber or cigarette drain is placed in the prevesical space and the abdominal wound is closed around these tubes. An interstitial saline is started in the operating room and continued in bed until three pints are given. Suction drainage is attached by means of a Sprengle pump to this rubber tube and employed for the first two days, when it may be discarded, and the bladder washed out daily through the suprapubic tube with warm boracic solution. The tubes are removed on the fourth day. After the removal of the large tube a smaller one is inserted or the urine may be allowed to soak into the dressings which are changed every three or four hours, the skin being protected by an ointment containing boracic acid, zinc oxide, lanoline and castor oil. The wound closes usually within three to four weeks. When it is nearly closed healing may be expedited by tying a catheter into the urethra. In one of my cases the wound was closed in fourteen days and a few days later a little leakage occurred, but it was permanently closed at the end of three weeks.

Danger and Complications of Suprapubic Prostatectomy.

(1) Shock.
(2) Hemorrhage.
(3) Uremia.
(4) Septicemia.
(5) Bronchitis, Pneumonia.
(6) Cerebral hemorrhage or thrombosis.
(7) Pulmonary embolism.

Shock is avoided by—(1) Careful preparation before the operation; (2) Operating on a heated table and in a warm room with the patient well covered; (3) By a rapid operation;

(4) By the use of an interstitial saline started during the operation; and (5) By the employment of gas and oxygen anesthesia.

Hemorrhage may be very considerable and prove serious. This can be combatted by flushing out with very hot water immediately on the removal of the prostate. Should it continue it may be necessary to pack the prostatic cavity with strips of gauze and introduce the large drainage tube down to the trigone. This packing should be removed on the second or third day, under gas anesthesia. Pilcher uses a special catheter with a bent-like end which enables gauze to be drawn tightly against the area from which the prostate has been removed. Secondary hemorrhage may occur a week or ten days later and is due to sepsis. If severe it can be treated as above. Large quantities of fluid are administered as a routine practice; eighty to one hundred ounces per day.

If uremia is threatened, dry cupping and hot fomentations are applied over the kidneys or a hot pack is employed.

Results.

Freyer reports an operable majority, in one thousand cases, of 5.5 per cent. and that his mortality has gradually decreased from ten per cent. in the first one hundred cases to three per cent. in the last.

Late Results.

The patient is able to pass urine naturally and completely empties his bladder, even in cases where the catheter life has been the habit for many years. The patient has complete control over the passage of urine after suprapubic prostatectomy. I have had no case in my own practice of incontinence following this operation. In one of my cases difficulty in urination, due to a slight stricture at the vesical outlet, occurred about three weeks after the patient's wound had healed and when he was going about. The passage of a sound into the bladder entirely relieved this.

Comparing the two routes.—Although drainage would appear to be better through a perineal wound, as a matter of fact

it is found that most of the urine drains from a suprapubic wound when a double operation has been performed. It is also found that the perineal wound closes sooner than a suprapubic.

The Advantages of a Two-Stage Operation Are:

(1) That the preliminary cystotomy relieves the back pressure upon the kidneys and drains the bladder and allows of treatment of the accompanying cystitis, thus relieving the patient of the necessity of getting up frequently at night, and giving him rest and comfort, which puts him in a much better condition to stand the second operation.

(2) When enucleation is undertaken it is more speedily done because the bladder is already open.

In twelve suprapubic prostatectomies by me performed since returning from overseas, there was no mortality. The following points were noted:—

(1) Each patient makes an uninterrupted recovery, leaving the hospital about the end of the third week after the second operation.

(2) The average age was seventy-one, the oldest patient being eighty-four. This latter patient was walking about during the third week when he left the hospital.

(3) The interval between the first and second stage varied from eight days to twenty-one days, depending on the patient's condition.

(4) The smallest prostate measured two inches in the greatest diameter, while the largest measured four inches.

(5) Control of the internal sphincter was regained in all cases, no incontinence occurring, and a strong stream being possible.

(6) Suction drainage was applied as soon as the patient was returned to the ward, and was continued for two days. It was found to have no influence in causing hemorrhage by suction on the torn vessels. The large tube was removed on the fourth or fifth day and replaced by a small tube for a week when it also was removed.

(7) The anesthetic used for the enucleation was nitrous

oxide and oxygen, preceded half an hour by a hypo. of morphia and atropine.

(8) In one case the prostate which was fibrous proved to be carcinomatous on microscopic examination.

(9) One case presenting symptoms of enlarged prostate was found to have extensive carcinoma of the bladder when submitted to suprapubic cystotomy. It had probably spread from the prostate.

THE IMMEDIATE SUTURE OF ACCIDENTALLY DIVIDED TENDONS*

N. A. Powell, M.D., F.A.C.S.

The surgery of the tendons is a subject of fascinating interest. From the simplest tenotomy to the most elaborate procedure, by which those structures, after transposition, are made to take on unwonted function it has the charm of novelty and of utility. Like the surgery of nerves, of blood vessels, of ureters and of the intestines it lends itself readily to animal experimentation with notable advantage to the patients of all surgeons, who, in this way, strive to improve their *technique*.

It is not, however, of the broad field of tendon surgery that I desire to speak to-night but rather of that small plot represented by accidental wounds definitely or potentially infected and involving one or more tendons. These are common injuries. In the Emergency Department of the Toronto General Hospital, we have had to deal with a long series of such cases, presenting an opportunity for trying out various suggested methods of treatment. A large proportion of these methods have been discarded. A few have been modified, and these we are still watching "to find the five which five hundred shall survive" out of all the plans proposed for widening the margin of safety and conserving the function of traumatized parts.

The indications are quite clear: First to sterilize without added irritation. Then to find, match up, and co-apt the cut

*Read at the Academy of Medicine, Toronto.

tendons, to relieve all tension, to immobilize perfectly and when the right time comes to loosen adhesions and restore function. Regarding the preparation of the wound area, watery solutions should be excluded. The iodine-gasoline solution 1 in 1,000 followed by 3 to 4 per cent. Tr. iodine *on the skin only*, stands the test of continued use.

Paraffin oil, *B.I.P.*, and best of all Dichlaramin T have all helped at times. Where infection cannot be avoided the last named antiseptic may save the situation. Evidence of its safety and its value has accumulated to an extent that would make us very loath to be without it.

Ether flooding of the wound has given such good results in the traumatic surgery of large joints that we are now giving it a trial with encouraging results.

Exceptions to the rule that *every* divided tendon should be sutured *at once* are almost negligible. They *may* unite without suture since nature is competent to fill in a gap in tendon if the sheath is not closed by inflammation or pulled apart by muscular action or by too early passive motion. The chance of strong union and good function is vastly improved by accurate suturing, and this should settle the question for us.

Deft handling is essential. The rough-and-ready surgeon —more rough than ready as a rule—will have scant success in such work. If I had not seen tendon ends masticated by heavy toothed forceps I should hardly have referred to this elementary fact.

An Esmarch elastic tourniquet should *not* be used since prolonged oozing is apt to result and make drainage necessary. When the wound requires a drain this should be a roll of gutta-percha tissue for choice. A rubber tube, used here, would be a surgical blunder and in surgery as in war a blunder is worse than a crime. In my experience it has seldom been necessary to open up a sheath in order to catch and bring down a proximal segment. An assistant compressing the muscle above and a pair of long narrow forceps, or, what has better served my turn, a crochette needle will usually suffice. Much grouping in a sheath is apt to set up irritation when we wish the quiet organization of an aseptic blood clot to proceed, and

so the opening of a sheath may be judicious. I have not so far had to do tendon lengthening in any case of primary suture. This is not saying that I may not require to do it to-morrow.

Methods of Suturing.

Fine round-bodied needles such as are used for intestinal work and fine silk or linen are best. No. 00 chromic catgut is perhaps better for the sheath when this structure is not past all

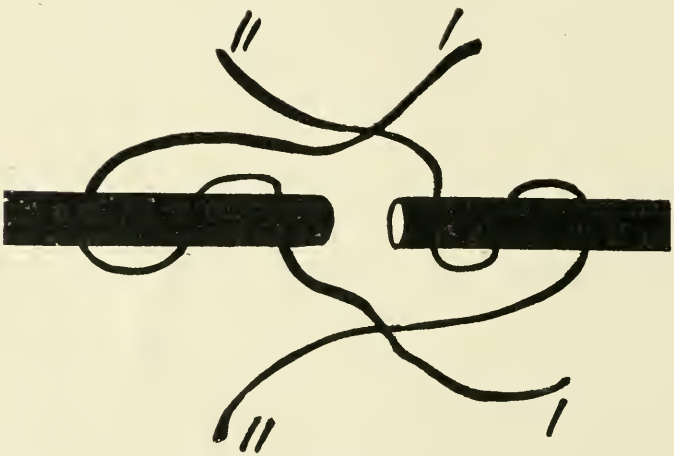


FIG. I.—A SAFE AND SIMPLE METHOD FOR REUNITING ACCIDENTALLY DIVIDED TENDONS.

surgery. To pass sutures through the ends of the tendon and tie them is useless—they always pull out. To suture the ends well back gives lumpy union and poor function. A combined method is better and many such methods have been suggested. Other things being equal a simple method is to be preferred. For many years I have been a contented routinist in the use of a simple method of combined suture. It is not an original method, and I am unable to say by whom it was first devised. The ends of the tendon are clipped at their edges and controlled by mosquito forceps. Looped lateral sutures on two aspects next co-apt the stumps. To take the tension off these an



FIG. II.—DIVISION OF SEVEN FLEXOR TENDONS, IMMEDIATE SUTURE, FULL RESTORATION OF FUNCTION.



FIG. III.—LITTLE FINGER AND STUMP OF THUMB SAVED. FLEXOR AND EXTENSOR TENDONS UNITED, TO GIVE A FLEXIBLE WRIST. STUMP COVERED WITH SKIN FROM ULNAR SIDE OF CRUSHED RING FINGER. EARNING POWER UNIMPAIRED.

S-shaped suture is next passed. It lies in the tendon just as the letter S lies in the parallel lines when we make the $ sign. The four threads are tied as shown in the drawing, and everything is secure.

In the case here shown a man fell on a broken milk bottle and divided seven tendons in the front of the forearm close to the annular ligament. These involved the radial and ulnar flexors of the wrist as well as the superficial and deep sets for the fingers. The nerves fortunately escaped.

Measured by a dynamometer his hand-grasp to-day is but ten degrees less than that of the uninjured hand, and its utility is unimpaired.

Suturing the ends of flexor and extensor tendons over the stump of a crushed hand will at times give a patient a flexible wrist and lessen his handicap.

This was the procedure followed in a case of which I show you a photograph. Here after co-apting the tendon ends over what was left of the metacarpal bones I utilized the skin of the ulnar side of the ring finger to cover them in. This allowed the little finger to meet the stump of the thumb and as the patient expresses it " to pull down as big a pay envelope every week as before he was hurt."

Sir Robert Jones has pointed out that the fixation of the hand in line with the forearm is fatal to good function. The principle of his hyper-extension hand splint is the correct one to follow.

Where the trauma is anterior the support must, of course, be reversed. We find no difficulty in meeting the indications by reinforced plaster of Paris splints moulded to the contour of the limb. Such support is individual and ideal and should be given the choice over any ready-made appliance.

Society Proceedings

THE ONTARIO MEDICAL ASSOCIATION

(Concluded from July issue.)

Dr. George R. Pirie gave a paper on the Diagnosis of Acute Intussusception. The reader of the paper states that this is a condition wherein no help could be obtained from special methods of diagnosis and that the physician had to depend upon a logical interpretation of the symptoms and a careful physical examination. Then followed an analysis of the various symptoms and signs. The healthy, lusty, baby boy who has a sudden attack of abdominal pain, intermittent and colicky in character, followed by nausea or vomiting, has an obstruction to some abdominal viscus. The prostration and the perturbed, pallid, perspiring face are entirely disproportionate to the symptoms exhibited. The occurrence of absolute constipation locates that obstruction in the bowel. The escape of blood and mucus from the rectum indicates that toxemia, following the obstruction, has produced a lesion of the intestinal mucosa. In a baby this is strongly presumptive evidence at intussusception, and with the symptoms just mentioned justifies a laparotomy. The discovery of the characteristic tumor in the abdomen either by external or bi-manual examination completes and establishes the diagnosis of intussusception.

Dr. Edward A. Morgan, of Toronto, in his paper on "Diarrhea in Infancy: General Management and Treatments," stated that special attention was paid to that form of diarrhea seen in the summer epidemic, viz., the chemical types of diarrhea. He pointed out that the true etiology is still obscure—only contributory causes being recognized at present. The

importance of prophylaxis was insisted upon as being the most efficient means of controlling the ravages of this disease. A short résumé of what is known of the chemistry of the condition led up to the two main indications for treatment, viz: Correction of dehydration and counteracting of intestinal fermentation. The diet should consist of either protein milk, protein milk powder, or skimmed milk with addition of casein flour. Initial purgation was not advised as it merely increases dehydration. The questionable value of initial starvation, colon irrigations and drugs such as bismuth and opium was also pointed out. The treatment of three other types of diarrhea was discussed—mechanical type, infectious type and the form associated with a parenteral infection.

The paper entitled "The Feeding Interval in Nursing Infants," presented by Dr. G. A. Davis, Serologist to the Department of Public Health, Toronto, was a comparison of the two, three and four hour methods of feeding. The amounts of food taken per feeding and per twenty-four hours on the different intervals were shown, and it was seen that infants fed on the two hour interval took about six to eight ounces more milk per day than those fed every four hours. This often produces dyspepsia, which can be relieved by lengthening the interval to four hours. It was also shown that infants fed every four hours do not at first gain weight as rapidly as those fed every two hours, but after the first few weeks they gain in about the same manner, and at the end of nine months were only about one-half pound lighter than the two-hour babies. Mothers busy with social and household duties will frequently nurse their infants when they can do so at four-hour intervals, whereas they would wean the baby if required to nurse it oftener.

An excellent paper was read by Dr. Emerson L. Hodgins, London, Ont. It consisted of a review of six common tumors of the brain, with the clinical and post-mortem findings.

The general and focal symptoms were reviewed in an effort to show the cause and mode of onset.

The early focal symptoms, the spread of the spasm and paralysis were emphasized as the best early guides.

It was pointed out that there was nothing in the tumor it-

self to cause the extensive increase of intracranial pressure which was probably due to alterations in the circulatory and cerebro-spinal channels.

The percentage of removable tumors was quoted as given by different authors, and a plea was made for early diagnosis by means of special study of the early focal symptoms.

The benefit of the compression was shown in the relief of headache, vomiting and optic neuritis.

Gross and microscopical specimens illustrative of the conditions were shown.

Dr. W. W. Lailey, of Toronto, contributed a most interesting paper on Complement Fixation Test (in gonorrhea in female.) He stated that the methods used for the diagnosis of chronic gonorrhea, particularly in the female, are unsatisfactory. The complement fixation test as discovered and recommended by David Thomson, M.B., Ch.B., Edin., used on 136 cases at the Toronto General Hospital, has given a high percentage of satisfactory results. It will have to be further used before any safe conclusions can be reached. Blood specimens are being sent as a routine from gynecological patients on Dr. B. P. Watson's service at the Toronto General Hospital, and a further report of these will be published later.

Dr. S. M. Hay's paper was entitled "The Diagnosis and Treatment of Some of the more Common Acute Abdominal and Pelvic Conditions."

Pain, he stated, is a very prominent symptom in acute abdominal conditions. Abdomino-pelvic pain may be one of three kinds; it is either continuous, intermittent, or a combination of the two—a continuous pain with intermittent exacerbations.

In the abdominal and pelvic cavities intermittent pain indicates either neuralgia, or some obstruction to the free flow of the contents of one of the four great tubular systems: the urinary, biliary, fecal, or, in the female, the genital series. It is well to remember that the ordinary contractions of unstriated muscle are not perceived; they are painless. While the forcible contractions of unstriated muscle are well-nigh unendurable, they cause the most severe pain that human beings can experience. All the colics are pathological examples of this fact, and labor

is a physiological analogue. I believe the pain in most of the acute abdominal conditions is just as severe as those above mentioned, but they are readily distinguished from them. In the colics the pain is intermittent and the abdomen is not rigid between the pains. In colic the patient usually tosses all over the bed, may even assume the knee-chest position or kneel on the floor with the abdomen lying on the bed. In the acute abdomen, especially in perforation of the stomach or duodenum, the patient usually assumes some fixed posture, generally bent forward.

The pain here is continuous, the rigidity soon becomes board-like and extends all over the abdomen.

This combination is important. It is well to remember that we do not get rigidity over an inflamed viscus until its peritoneal surface becomes inflamed. A gastric ulcer may cause pain, but not rigidity until the ulcer has extended far enough to affect the peritoneal coat of the stomach.

The character of pain, if it be possible to obtain any reliable description, has its value in diagnosis, especially in the conditions at present under consideration. An intense, sudden, tearing, rending pain, often severe enough to produce collapse, and usually associated with sharp vomiting, is common to a comparatively small class of cases. These are: Rupture of:—first, ectopic gestation; second, pyosalpinx; third, appendix abscess, where the rupture takes place into the general peritoneal cavity; fourth, gall bladder; fifth, gastric ulcer; sixth, duodenal ulcer. It is worthy of note that these are all ruptures of important organs, permitting the escape of an irritating fluid into a healthy peritoneal cavity. Kindly underline the words irritating and healthy. In ascites we get none of the awful acute symptoms, although the peritoneal cavity may be filled to its capacity. Why? Because the fluid is not irritating. Again we may have a considerable quantity of pus in the peritoneal cavity in tuberculous peritonitis, and none of these symptoms appear, because the peritoneum was unhealthy when the pus came into contact with it.

In percussing the abdomen in the case of rupture of gastric or duodenal ulcers we may find a disappearance of the liver dullness: this is very significant. As the stomach contents pass

through the perforation so does air; and this air raises the abdominal wall from the liver surface and we get tympany where we normally get liver dullness. Of course we may get a disappearance of the liver dullness from an over distension of intestinal paresis in typhoid fever. But a moderate distension of the abdomen with the disappearance of liver dullness must not be disregarded. The treatment of all these acute conditions is surgical, there is no medical treatment.

Our diagnosis having been made and our line of procedure decided upon, we may give the patient a quarter or a half a grain of morphia to relieve the awful pain. Morphia should never be given before the diagnosis is made, and the relief and comfort which it brings to the patient should never cause us to weaken in our decision to operate.

Dr. Archibald in his paper took up briefly certain aspects of the pancreatitis problem, particularly with regard to the etiology. He reviewed the two or three theories as to causation which at present hold the field, pointing out that in his opinion the majority of cases were due to the entrance of bile, altered in its chemical composition, frequently by infection, into the pancreatic duct as a result of a spasm of common duct sphincter. Mr. Brown, of the Chemical Department of McGill University, working under Dr. Harding, had begun an investigation at Dr. Archibald's suggestion of the chemical constitution of bile as altered by infection, particularly with regard to the proportions of the colloidal constituent (mucin) and the bile salts. Bile salts were the active agent in causing pancreatic necrosis. Three normal biles and one infected bile had been analyzed, and it was found that the proportion of bile salts in the infected bile had been increased from six to twelve fold over that of the mucin, as compared with normal bile. This hitherto undescribed alteration would seem to account for the much greater tendency to the occurrence of severe pancreatitis in infective gall bladder conditions. He admitted the possibility of contents of the duodenum, in minute quantities, getting back into the common duct in the way observed by Mr. Bond, that of reversed mucous currents. Carmine granules given by mouth can be found in some cases coming out through a cholecystectomy drain. He

pointed out that activation of trypsin might be brought about, not only in this way through enterokinase, but also without enterokinase, namely by damming back of pancreatic juice into the gall bladder, and its activation there by the bile or by bacteria. In this latter case it might be considered possible, even probable, that in isolated instances the bile containing this activated pancreatic juice might be forced on the road down into the pancreatic duct and there, even when the bile was normal, set up a moderate grade of pancreatitis. In two or three instances out of a few examined he had found trypsin in the gall bladder bile.

He reviewed briefly the four chief types of pancreatitis from the clinical standpoint, and emphasized the fact that pathologically the primary lesion was always one of necrosis, and that the cause of death was absorption of split protein products from the dead pancreatic cells.

He called particular attention to a fairly numerous type of case, characterized by acute pain in the epigastrium and right hypochondrium, coming on in attacks lasting not more than a few minutes to two or three hours, in which operation failed to reveal any organic cause such as ulcer, stones or adhesions, while in a few palpation of the pancreas suggested, though doubtfully, some slight thickening of that organ. Such cases he felt inclined to regard as being often due to spasm of the common duct sphincter analagous to pylorospasm, and sometimes to very mild pancreatitis.

Dr. Mundell reported seventeen cases of transplantation of tendons done at Queen's Military Hospital (now Sydenham Hospital). Of these nine were for paralysis, the result of injury to the musculo-spiral or to the posterior interosseous; one for injury to the median and ulnar nerves; and one for injury to the median and musculo-spiral; while six cases were the result of injury to the great sciatic or to the external popliteal nerve.

The results, especially in the case of the upper limb, were in nearly every case very satisfactory. Nearly all the cases reported were able to be returned to civil life with a useful hand.

The pronator radii teres was separated from its insertion into the radius and was sutured with linen to the extensor carpi radialis longior. The flexor carpi radialis was divided near the wrist line and was transferred to the dorsal surface of forearm, and having been split was sutured in front and behind to the individual tendons of the extensor communis digitorum. The palmaris longus was transplanted, and slips of it were sutured to the individual extensors of the thumb.

In the case of injury to the median and ulnar, the extensor carpi radialis longior was transplanted and sutured to the flexor sublimis and flexor profundus digitorum; and in one case, in which the median and musculo-spiral were destroyed, the flexor carpi ulnaris was inserted—one slip in front into the flexor sublimis and the two outer tendons of the flexor profundus, and the other slip to the back of the forearm into the extensor communis digitorum.

In the case of "drop foot," from injury to the external popliteal, a portion of the tendo achilles was brought forward and sutured to the extensor communis digitorum and, in addition, a slip from the tibialis posticus was sutured to the tibialis anticus. These corrected the plantar flexion present in drop foot, but did not remedy the inversion; and for the latter purpose the peroneus brevis was split over the lower portion of the fibula, the periosteum divided, a tunnel one-and-a-half inches or two inches made in the bone, the peroneus longus tendon was embedded in this tunnel and the divided periosteum sutured over it.

In nearly all the cases of drop foot, the results were also very satisfactory, as the patients could walk with only a very slight defect.

In each case of tendon transplantation the hand or the foot was put up in an over-corrected position and held there for about two weeks by a plaster Paris cast, when massage was employed, and later on an attempt was made to re-educate the muscles in their new functions. This re-education of the muscles was found to be productive of excellent results.

Asepsis as strict as in bone transplantation was followed throughout in each operation.

The West China Union University.—The following resolution was unanimously passed by the Association:—

Whereas, for the sake of a country containing one-fourth of the world's population, as well as for the protection of all other countries, there exists an urgent need for extending civilization in China, and

Whereas important parts of any plan for meeting this need must be extensions of medical, dental and nursing education in that country, and

Whereas, in the coastal provinces of China, the Rockefeller Foundation has expended or is proposing to expend eighteen millions of dollars for such extension as is most immediately required, and

Whereas that foundation, after full investigation by Doctors William H. Welch, Simon Flexner and George E. Vincent, has relegated educational projects in the Province of West China, with its population of seventy millions, to the West China Union University, and

Whereas the West China Union University in Chengtu, the capital of the Province of Szechuan, is fully organized and is doing splendid work, and

Whereas, the providing of buildings for medical and dental and nursing education, by a fund collected by volunteer committees of these professions in Canada is now being promoted and is meeting with excellent success,

Therefore, the Committee of General Purposes of the Ontario Medical Association commends this project to the Association for cordial endorsation and recommends that, through its affiliated societies and the profession generally, a warm support should be ensured for this worthy object.

The following extract from a letter written by the outstanding representative of American medicine will be of interest in this connection:

I returned from China in 1915 convinced, as were the other members of our commission, that medical missionary work is the

most important agency in reaching the people of this country and in promoting their advancement and development. We were inspired with admiration of the devoted zeal of the medical missionary and with enthusiasm for the possibilities of advancing the welfare of China by means of medical education and practice.

I know something of the project in Chengtu, situated in the capital of one of the largest and most progressive provinces in China. The needs of this province cannot be served by developments in other parts of China, and it is impossible to exaggerate the importance of maintaining and developing the college in Chengtu, already so auspiciously started. The mental, spiritual and physical returns will be great, out of all proportion to the money invested. The appeal for support should receive the most generous response from the medical, dental and nursing professions as well as from the public.

ORTHOPEDIC ASSOCIATION ELECTS ITS OFFICERS

When the American Orthopedic Association concluded its thirty-fourth annual meeting at the Mining Building, University of Toronto, the delegates voted it the most successful convention in the history of the association. The officers elected at the Executive Association are: President, Dr. R. B. Osgood, Boston; President-elect, Dr. Nathaniel Allison, St. Louis; Secretary, Dr. Plummer, Boston. Although not definitely decided, it is expected that next year's convention will be held in Boston.

ROCKEFELLER GIFT TO UNIVERSITY OF LONDON

The Senate of London University adopted a resolution on June 23rd, accepting the Rockefeller Foundation gift of £1,205,000 for medical teaching and research work. The resolution expresses the senate's grateful appreciation of the magnificent generosity shown by the Foundation Trustees.

Therapeutic Periscope

ONE-DAY CURE FOR ITCH

Dr. L. B. Cranston (*Memphis Medical Monthly*) recommends that at night the skin be scrubbed from the neck down with green soap, using a brush. This takes fifteen minutes. This is washed off with hot water, using a brush. This washing and rubbing should occupy thirty minutes, then rub in the following:

Ichthyol	20
Sulphur sublimated	12
Carbonate of potash	6
Triturated camphor	2
Grease	60

The next morning wash this off with hot sulphur water. This takes fifteen minutes.

Sulphur water is made by putting three ounces of hepar sulphur in a pint of water and letting it stand all night. The next morning this is poured into the bath water. After taking the bath in sulphur water the man dresses in clothing that has been sterilized by heat. All clothing and bed clothes which have been in contact with the patient are sterilized by heat.

HEADACHES FROM SINUS TROUBLES

Dr. C. C. Albright (*The Journal-Lancet*) believes that most cases of so-called migraine, the cause of which has been hard to determine, and also a great many obscure eye troubles, are caused by accessory sinus disorders, and can be relieved by proper intranasal treatment.

TREATMENT OF EXTENSIVE SEPTIC WOUNDS

Dr. Henry Gardner (*The Medical Standard*) describes a method for treating extensive septic wounds with no permanently applied dressing. The ordinary incisions for opening up recesses in pockets are made as soon as the patient has recovered from the result of transfer to the hospital. This is done with the idea of obtaining the maximum effect of gravity in the subsequent treatment. The foot is then packed with gauze and bandaged in the usual way, the sole object of this being to assist in stopping oozing of blood. All dressings are removed forty-eight hours later. The wound is then syringed with some mild antiseptic, boric or weak eusol lotion. A guard made from perforated zinc, cut in an appropriate size and bent in the form of a cradle, is placed over the limb or part wounded and covered by a sterilized towel. If possible, an ordinary cradle is placed over the whole. Any discharge from the wound is allowed to run out, and is taken up by a sterile pad of wool or spaghnum moss so placed as not to touch the wound. At intervals varying with the amount of discharge, on an average twice a day or, in some cases, more frequently, the nurse lifts the towel and zinc guard, syringes or swabs the wound and changes the pad. The guard and towel are then replaced. This treatment is continued until all pockets and recesses have been closed by granulation.

TREATMENT OF GOITRE

Dr. H. J. Boyd (*British Medical Journal*) deals with the effect of locality, water supply, heredity, sex, etc., on the production of goitre in his district. With regard to treatment he finds that patients object to paint their necks with iodine or to blister their skin with the red iodine of mercury. They may take iodine or potassium iodine for a time, but will not persist long enough. He has tried many things, including thymol, thyroid extract, etc., but as far as his district is concerned he feels that advice about the careful boiling of water for drinking purposes is the safest. In families where several members suffered from goitre while others escaped he found that the affected ones were great water drinkers.

WOUND SHOCK AND ITS TREATMENT

Dr. James E. McCartney (*Edinburgh Medical Journal*) summarizes as follows:

Injury to muscle tissue, causing a traumatic toxemia, is one of the main features causing secondary shock.

Other probable secondary factors are hemorrhage, cold, fatigue, pain, and lack of food.

The result of shock is to cause a marked lowering of blood pressure, and the consequent anemia affects, especially the nerve centres.

(In this connection Mott examined some of the brains from our fatal cases, and found degenerative changes in the nerve cells such as appear when the brain has been anemic for some time.)

In resuscitation work the treatment of three phenomena has alone yielded successful results, namely:

(*a*) Lowering of body temperature.

(*b*) Lowering of blood pressure.

(*c*) Diminution of blood volume.

It is the cases of hemorrhage combined with little shock which forms the successes in resuscitation work.

The treatment of acidosis by intravenous injection of sodium bicarbonate has little or no practical value in cases of shock.

INJURIES OF THE PERIPHERAL NERVES FROM THE SURGICAL STANDPOINT

Drs. H. S. Soutar and E. W. Twining (*American Journal of Surgery*) state that in operating for injuries of the peripheral nerves, it is essential that an accurate idea of the anatomy of the region be had; of the condition of the nerve which is to be repaired; and of the method by which repair is to be accomplished; and the latter should be the simplest possible. Excision of the scar is necessary into healthy fibres, and end-to-end suture is best. The physical treatment should be based on a definite routine, modified in accordance with the special requirements of the case. For this a good organization is necessary.

Correspondence

The Editor cannot hold himself responsible for any views expressed in this Department.

MR. HICKSON'S MISSION

June 25th, 1920.

Dear Dr. Young:—

As far as I am aware, no Academy of Medicine in any city of the United States has investigated Mr. Hickson. I have talked with a good many people who have attended his meetings and have felt myself wholly in sympathy with him. He is not trying to heal anybody and repeatedly denies any such power. He urges people to pray and believes there is much more healing to be had for all of us through prayer than we ordinarily avail ourselves of. On this, I quite agree with him.

As far as I can see, he is doing a great deal of good and no harm.

Yours sincerely,
Richard C. Cabot.

MENTAL HEALING

Baltimore, Md., June 27th, 1920.

Dear Dr. Young:—

I do not know of any Medical Academy which has investigated Mr. Hickson's work, and "cures." I went once to observe for myself, but was too late to see more than a church fairly well filled with people, and some nurses in the aisle, who had accompanied the patients who came for prayer and blessing. I have been in entire sympathy with Mr. Hickson's efforts as far as I have understood them; if I am wrong you will doubtless be able to correct me from a closer observation.

I do not think he professes to cure anything, but simply to call professing Christians back to a life of faith, and to ask that they may have grace to put their whole trust in God as a Father, and then to ask Him if it is His will to cure them. A simple child-like faith in God through Christ is fundamental, therefore, the prime object in any Christian's life must be, not in any instance to get well, but to know and to do His will, and to submit to that will whatever the consequences.

This calls for a life of prayer and entire dependence upon God, which after all is the only true Christian life, to which we must be brought, whether sick or well.

Let me be more specific, and make the matter personal; I find, we will say, that I have a cancer of the stomach. Being a Christian my first thought is that the warning has come from my Father that I must set my house in order and come home, but as the wearying days and nights follow one another, and the body breaks under it, I often cry to Him for relief, and without doubt I will often also cry to Him if it is His will, to make me well; the outcome I will accept as the indication of His will. I am by no means ready to say that a cure in answer to prayer in such a case is impossible, or that He never has or will perform such a miracle, I only declare that I have never seen one, or heard of one I could trust. This does not preclude, but rather insists on the use of all other rational means to get well, for all agencies are His. I think that if God our Father does such things in these days, it may, perhaps, rather rest between Him and His child as a personal matter; I think that this may be the case because of the many fakirs, and false miracle workers, emissaries of Satan, who are abroad. The trouble with the miracle workers in our day is that when the patient is taken sick his one desire is to get well, and he goes to the Divine Healer and either gets well or thinks he is well, and thenceforth becomes a propagandist for that method of healing all the sick, and true faith is not helped, but hurt by it.

Mr. Hickson, as I understand his work, puts Christ first of all; you must forget about everything but faith in Him, and then rest your case in His hands that He may do for you as seems best to Him.

I was actually very ill a few years ago and had a severe surgical operation; as a Christian I had talked it all over with my Father, and finally when I went under an operation, uncertain as to the outcome, just as I started to take the ether, I remarked to the nurse, " Nurse it is a great thing to know if you have to pass through those everlasting doors, that you have a Friend waiting for you on the other side! " and so I fell asleep. When I awoke it was to find that the trouble was not malignant, as it might easily have been. I gave my Father thanks as well as the doctor, and to me it was just as much a gift of a longer life and service, as though what men call a miracle had been performed. I mention this to show that the question of being well or ill is all bound up in the life which we have momentarily from Him, and that it ought not to be anything unusual for a child of His to stand up and declare such things from the pulpit. The shame of it is that more ministers are not saying the same thing. No harm, but only a quickening of the faith in the Church as far as I can see it can come from Mr. Hickson's efforts, which are utterly different from those of the spectacular miracle workers. Let us doctors all also " Have faith in God! "

Sincerely yours,

Howard A. Kelly.

COMMERCIAL DEPARTMENT

THE PROGRESS OF PRINCE'S LIMITED

Since the story appeared in these columns recently of the steps that were being taken to provide Toronto with a much-needed high-class restaurant and luncheing establishment, a good deal of interest has been evinced by readers of this publication in the progress of the undertaking and numerous questions have been asked as to how the project is getting on. It is generally conceded that Toronto stands sorely in need of such a resort, there being absolutely nothing of the kind to be found in the city and both Torontonians and out-of-town visitors are eager to know when the doors will be opened for the entertainment of the public.

To the medical profession in particular, the sanitary nature of the arrangements will have a special appeal. Almost as much stress has been laid on having the kitchens, the bakery and the confectionery department bright, spotlessly clean and airy, as on having the dining room commodious and attractive. The management pride themselves on this feature and will welcome inspection of the equipment of the institution from top to bottom. Indeed an examination of all the apparatus and labor-saving devices which have been installed will prove a revelation to those who are interested in this special phase of restaurant service. They represent the last word in the outfitting of such an establishment.

The aesthetic taste of the profession will undoubtedly be satisfied by the scheme of decoration which has been adopted. It is rich and satisfying but not ornate. Throughout the building all the standards of refinement have been maintained, with the note of delicacy predominating. The lighting will be unique, being produced from sunburst effects, giving a full, clear light without any glare. The wall brackets, etc., are all created after Prince's Limited's own registered design, the three feathers of the Prince of Wales' crest, with the motto "*Ich dien*" and these will serve to impress the exclusive character of the place and its service.

CONSTIPATION IN CHILDREN

It is undoubtedly during the winter months that constipation in children becomes most marked. Lack of exercise and fresh air with the added duties of school work may be considered a predisposing cause in some cases. Diets, too, are somewhat changed, due to lack of fresh vegetables, and what is most important is that children have not been trained to the importance of regular habits of going to stool. The symptoms of acute constipation may become very alarming, stimulating the prodromes of an acute infectious disease. The temperature rises to 103 deg., the child becomes drowsy and apathetic, yet irritable when disturbed. In chronic cases, even of the more severe type, there may be seen no change in the health of the child. The complexion is usually sallow, dark rings appear about the eyes, the breath is foul and the tongue coated. The temperature in these cases may be raised slightly at night, and it is noticed that the child becomes fatigued very easily. The appetite is capricious. The outline of the colon may be easily felt and sometimes seen protruding along the abdomen. Thread worms may commonly be present. In acute cases, clean out the bowels immediately with castor oil. Laxol has the advantage not only of being tasteless, but it is an absolutely pure product. Castor oil (Laxol) has also the therapeutic advantages of both cleansing the intestines and also of clearing the blood of those poisonous materials of imperfect digestion which have caused the toxemia. It is well to repeat the dose of Laxol daily for a few days and then give it once a week for a short time, according to the apparent necessities of the patient. In the treatment of chronic cases, too often the mistake is made of giving, in all cases, large quantities of bulky and indigestible foods, such as bananas, apples and the like, which are only indicated in the mildest forms of constipation. Such foods have a tendency to stretch the muscle walls which have already lost their tone.

The following outline of treatment can be carried out with good success in most cases:

(*a*) Investigate the diet, omit the bulky foods, give water freely between meals to increase the fluidity of the intestinal contents. Thin oatmeal porridge should be added to the diet.

(*b*) Abdominal massage should be practised once or twice daily. In spastic constipation, with contracted colon, this must be omitted.

(*c*) Castor oil (Laxol) should be used as a cathartic, and it is well to use either cascara or an A.S. and B. pill to tone up the mucous membranes. This can be done by alternating doses, that is giving Laxol one evening and the cascara the next.

(*d*) A glass of hot water on rising, together with the habit of going to stool regularly.

If these measures are carried out, with gradually decreasing doses for a period of five or six months, chronic constipation can be overcome.

THE MAKING OF KELLOGG'S KRUMBLED BRAN

You are familiar with the advantages of Bran as a remedial agent in preventing and overcoming constipation through the diet. Its value, you will agree, is being recognized more and more by physicians and dietitians.

The manufacture of Kellogg's Krumbled Bran, while quite simple is only made possible by a new shredding mill recently perfected by this company. In the process of manufacture only the highest quality selected wheat bran is used. The bran is thoroughly cleaned, removing all flour and foreign material, sterilized and mixed with the famous Kellogg flavor. It is cooked for a short time in large rotary steam cookers under high steam pressure, then dried in rotary drum driers until it is quite dry. The flavored, cooked and dried bran is now ready for shredding. This is done by means of two grooved rolls, one roll being pressed against the other and the bran passed through between. The pressure is so great that it unites the bran flakes,

cutting them off in the form of long shreds. These shreds are then baked in huge flight ovens travelling back and forth, dropping one flight to another until they pass through the oven, a distance of about six hundred feet, which requires approximately thirty minutes to do this cooking or toasting. The toasting is done by means of gas burners.

There are four of these huge ovens in our Bran Department. We manufacture all the gas for the ovens, and it requires over four hundred thousand cubic feet per day for each oven.

The chemical analysis of Krumbled Bran is as follows: Moisture, 2.5; protein, 15.4; fat, 2.2; crude fibre, 9.9; ash, 8.4; carbohydrates, 60.4.

THE TREND OF THE TIMES

Senator Warren G. Harding, the Republican candidate for the presidential election this year, is a cigarette smoker. It is stated that if he is successful at the polls, he will be the first United States President to make use of tobacco in that form. One may safely predict that in future years there will be other candidates who will smoke cigarettes. Most men of the time are smokers and the cigarette deserves its popularity.

DOCTORS' BOOK KEEPING

We take pleasure in referring our readers to the announcement of Stewart & Co., 81 King Street West, Toronto. This firm *specialize in the keeping of doctors accounts* and are in a position to materially simplify the collection of accounts for members of the profession who have not the time to look after such details and are too apt to let their books get into more or less of a muddle, thereby reducing the yearly income somewhat seriously. *The Stewart System* is well worth looking into and we would suggest that our readers phone "Adelaide 4269" for full information which will be supplied promptly.

AN IDEAL RESORT FOR CONVALESCENT PATIENTS

Physicians have frequent opportunities of referring those convalescing from illness to a resort where they can quickly recover their old-time vigor and enjoy an almost ideal climate, 2,500 feet above sea level. Such a resort is Virginia Hot Springs, just one night out of New York. The management have spent a huge sum of money on this choice spot in "Old Virginny," and are anxious that the Canadian medical profession should continue to refer cases there, as they have done in years gone by. The Homestead Hotel is one of the handsomest houses in America. It is built of solid brick, containing 500 guest rooms, with many parlor suites and 300 private baths. It is spacious, dignified, quiet and restful, with magnificent mountain views on every side. It is no exaggeration to say that Hot Springs means the Homestead Hotel. The Company owns 5,000 acres surrounding the hotel, so that physicians can understand that their patients have every opportunity of enjoying outdoor life and regaining thereby their normal strength.

The dominant factor making Hot Springs world-famous is the cure in which the climate as well as the water assist. The waters are conducted by gravity to the bathhouse and distributed fresh from the ground to the bathing apartments on different floors without loss of heat or its increase by artificial means, and fully charged with all their gases and other health-giving qualities. At none of the celebrated places in Europe, and at no other springs in America, is the temperature prescribed for hot baths that at which the water actually emerges from the earth in the natural springs.

The springs are beneficial, not only for bathing, but for drinking. Besides the hot springs, the effects of which as drinking waters are pronounced, there are magnesia, sulphur, and soda springs within the grounds, and alum water from a spring not far distant. The water from the soda spring comes strong and clear from the ground at a uniform temperature of 74 degrees. Physicians should address for full information Christian S. Andersen, Esq.

The Canadian Journal of Medicine and Surgery

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Editorials

PREVENTION OF INSANITY

In some cases mental disease may progress for years and not be discovered until a sudden outbreak reveals the condition, according to Drysdale in the *Cleveland Medical Journal*. This is not the rule, however; so the general practitioner should be on the alert for the earliest symptoms and signs of mental aberration. Watch ought to be kept for obsessions and the morbid occupation of the mind by unwholesome ideas; for evidence of loss of self-control in thought, word and deed. If such morbidity be due in part to the patient's method of life, occupation or environment, he should be given other work and more wholesome surroundings. Much of the strain of life is due to the fact that people get misplaced—square pegs in round holes.

Drysdale, of Cleveland, holds that a knowledge of the patient's temperament, habits, emotional tone,

predominant ideas, conduct in the family circle and in his business relations, diseases suffered, whether he is morbidly suspicious, delusional, or hallucinatory, is indispensable, and suggests that the patient should be approached in a frank, honest, fearless, natural and sympathetic manner. The subject should not be made to feel that his mentality is in question; and must not be deceived, contradicted or irritated unless necessary to test his self-control. A thorough physical examination is needed; and while this is being made especial attention ought to be most carefully paid to the facial expression, speech, mannerisms and peculiarities of conduct. Meningitis, cerebritis, infectious fevers, sunstroke, injury to the head, hysteria, delirium tremens and the delirium preceding death must be excluded. Close inquiry must be made of the family history. In many instances the first signs consist of an altered personality or an exaggeration of the individual's natural disposition—his faults and weaknesses becoming intensified and irritability more pronounced.

Unprovoked explosions of fury, a tendency to take offence easily, and boisterous incoherency are particularly injurious to mental health.

The most destructive emotion is fear. Emotional shocks also disturb the mental equipoise. Hate, envy, sudden fright, thwarted affections, business failures, disappointments, bitter grief, seriously disturb conscious control.

When a depressed patient continues to worry needlessly over trifling annoyances, seeks seclusion,

entertains the conviction he has defrauded, betrayed friends, ruined his health, is unfit to live, committed the unpardonable sin, he should be regarded as seriously deranged and in great danger of self-destruction. *Per contra,* the emotional uprising may take the form of exaltation or mania—excessive hilarity, facetiousness and loquacity; boastfulness, irascibility; noisiness and gesticulation; during which criminal acts may be performed. Such are the preliminary symptoms in paresis and manic depressive insanity. Manic depressive accounts for 65 per cent. of the cases of insanity. It is common in youth and early adult life; prognosis, favorable if treatment is prompt and proper.

Dementia praecox occurs from 16 to 20, developing insidiously. Inability to concentrate or perform mental tasks, weakness in judgment, lack of interest, are to be noted in some; while others are lethargic, sullen and slovenly. The prognosis of dementia praecox is not promising; some patients partially recover.

Paranoia is characterized by systematized delusions. Delusions are signs of a disabled mind, particularly if accompanied by irregularities of conduct and neglect of ordinary rules of life. Hallucinations of any of the senses are significant of mental invalidism, particularly if they cannot be reasoned away by the patient.

Recoveries in insanity vary from 20 per cent. to 38 per cent., and, odd to relate, the percentage of such in private sanatoria is not greater than in state hospitals.

It is regrettable that many curable cases of insanity have been detained in unfavorable environments until the opportunity for amelioration is past.

The curability of the mentally sick is dependent upon early recognition and treatment of the disease, and the modern physician must prepare himself for this important service.

NEW PROFESSORS FOR VARSITY

The following appointments to the Faculty of Medicine and Connaught Antitoxin Laboratories of the Toronto University were handed out by the Bursar recently. About one hundred more appointments are to be made to other faculties. They will be announced later.

Clinicians—Drs. R. G. Armour, G. F. Boyer, W. R. Campbell, A. W. Canfield, A. H. Caulfield, R. A. Clarkson, H. K. Detweiler, J. H. Elliott, A. A. Fletcher, A. M. Goulding, N. Gwyn, B. Hannah, G. W. Howland, H. S. Hutchison, R. Jamieson, N. M. Keith, J. D. Loudon, D. McGillivray, A. J. Mackenzie, A. G. McPhedran, J. H. McPhedran, F. S. Minns, E. A. Morgan, L. Murray, W. Ogden, J. A. Oille, T. J. Page, H. C. Parsons, G. Pirie, F. W. Rolph, C. Sheard, jr., D. K. Smith, G. E. Smith, H. Spohn, G. S. Strathy E. J. Trow and G. S. Young.

Dr. G. W. Lougheed demonstrator clinical microscopy; Dr. A. B. Moffatt, assistant clinical microscopy.

Pediatrics—Miss A. Courtney, chemist; Miss I. MacLachlan, assistant chemist, and Miss G. Boyd, research fellow.

Connaught Antitoxin Laboratories—Dr. R. D. Defries, associate director in charge of antitoxin division; Dr. A. H. W. Caulfield, part time research associate; Miss L. Hanna, research assistant.

Canadian Journal of Medicine and Surgery

Toronto Canada

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Address all communications to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Reprints, including halftones, etc., supplied authors at Net Cost.

Original Contribution

CANADA'S MILITARY HOSPITALS*

By W. L. Symons,
Architect in charge of Military Hospitals.

The question of military hospitals, their inception and rapid development under the administration of the Military Hospitals Commission, has been dealt with in a former number of this magazine. Too much cannot be said in praise of the original organization, in its efforts to cope with a situation so new, so sudden, and so prodigious in its scope, as the caring for the ever-increasing flow of convalescents from the battlefields of France and Flanders.

The purpose of this article will be to record the further development of the work, and the gradual evolution in hospital planning and growth which has brought the work to its present state of completion.

On April 1st, 1918, the entire work of building and equipping military hospitals was transferred from the Military Hospitals Commission to the Chief Architect's Branch of the Public Works Department, Ottawa, and to the efforts of that staff are due the success which has attended the furtherance of this work to present stage of development.

The Department of Militia and Defence, under whose authority the control and maintenance of all military hospitals came upon completion, appointed a special committee at the time consisting of an expert in each branch of the Medical and Surgical Service. To this Board of Consultants were referred the plans for expert advice, and to this collaboration with the

* We are indebted to the publishers of "Construction" for the illustrations accompanying this article.

architects is no doubt due a large measure of the success attained.

Beginning, as it did, in the early period of the war, with the caring for invalid cases in private houses—many of them generously loaned to the Government by the owners—the growth of military hospitals in Canada might be recorded as follows:

(*a*) The remodelling of large dwellings such as Oak Hill Military Hospital, St. Catharines, Ont.; Elmhurst, Kingston, Ont.; and the Sir Sandford Fleming House, Ottawa, Ont.

(*b*) The remodelling of schools, colleges, and other large public buildings, such as Queen's University, Kingston; Loyola College, Montreal; Knox College, Toronto; Ross Park School, Moose Jaw; Earl Grey School, Regina; Ogden Hotel, Calgary; Shaughnessy and Fairmount Schools, Vancouver, etc.

(*c*) By additions to existing institutions, such as the Asylum at Whitby, Ont., and the Reformatory, at Guelph, Ont.

(*d*) By the building of entirely new units capable of expansion, as, for example, at Camphill, Halifax; Ste. Anne de Bellevue, P. Q.; Westminster, London, Ont., and Tuxedo, Winnipeg.

The latter development represents to date the ultimate and most important phase of military hospital work which has so far been carried out. As the war dragged on into the third year and the devastation and toll in lives became very real, those entrusted with the work began to realize what a tremendous undertaking confronted them. It likewise became evident that the demand for facilities was fast outgrowing the policy of altering and adding to existing buildings. New buildings with increased accommodation must be provided, and on short notice, buildings of permanent construction were out of the question. Then it was that the construction of semi-temporary buildings became the set policy. The type adopted had much to recommend it. It was economical, could be quickly built and easily altered and added to.

The first building of this type and an entire unit was built at Camphill, Halifax, N.S. (See Fig. No. 1.) It consisted

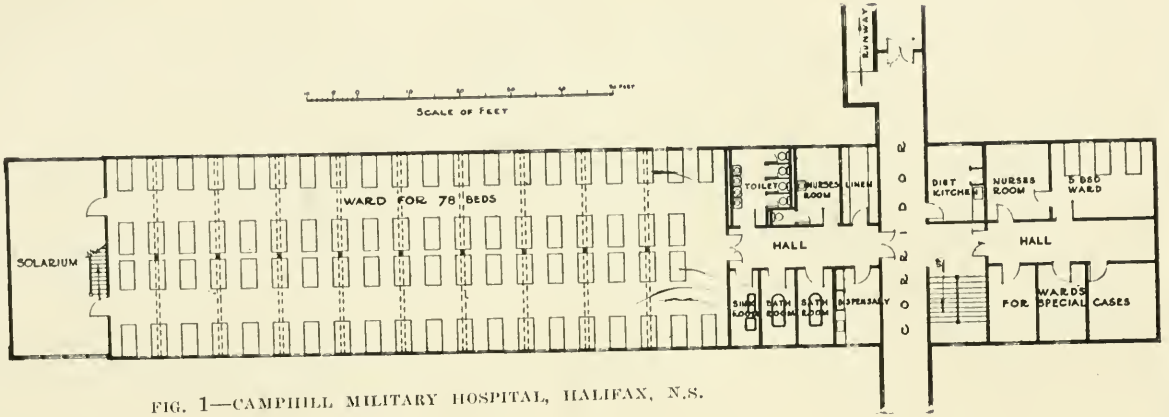


FIG. 1—CAMPHILL MILITARY HOSPITAL, HALIFAX, N.S.

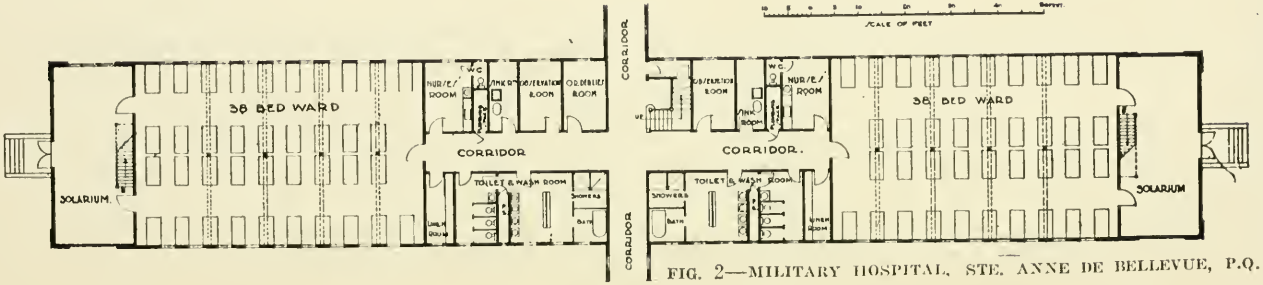


FIG. 2—MILITARY HOSPITAL, STE. ANNE DE BELLEVUE, P.Q.

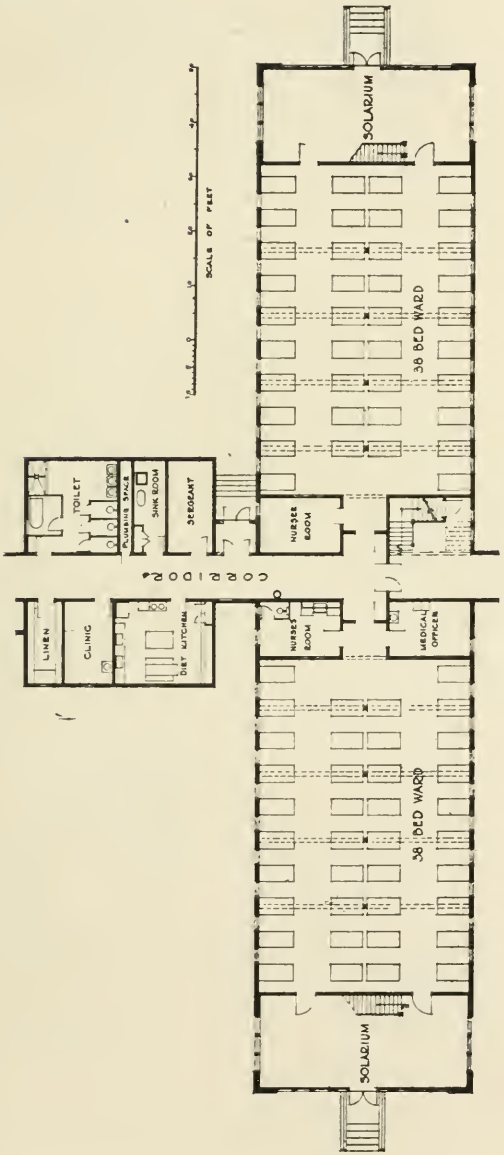


FIG. 3—MILITARY HOSPITAL, TUXEDO PARK, WINNIPEG.

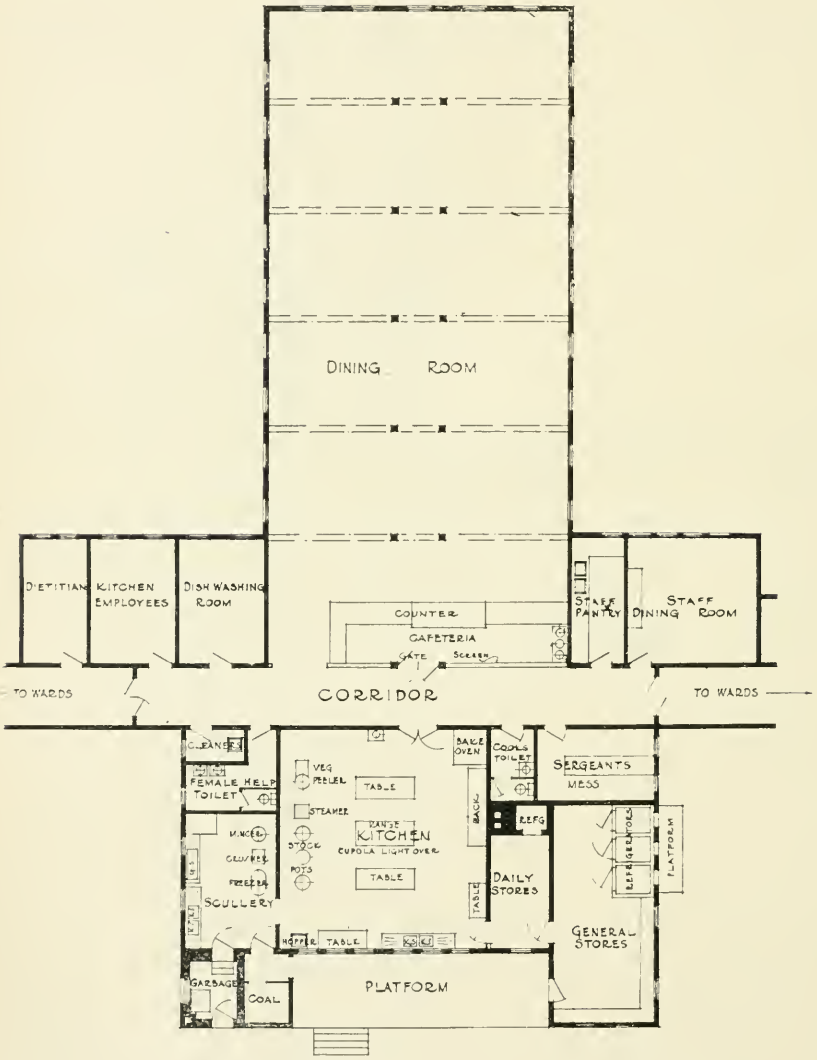


FIG. 6—MESS UNIT, FREDERICTON (N.B.) HOSPITAL.

of two ward buildings, each accommodating one hundred and fifty patients, together with a general service building.

These ward buildings were two storeys high, providing on each floor for one large ward of 76 beds. At one end of the ward was a connecting corridor, and adjacent to it were rooms for nurses, orderlies, toilets, and general utilities. At the other end was a large solarium with a stairway leading from the first to the second floor.

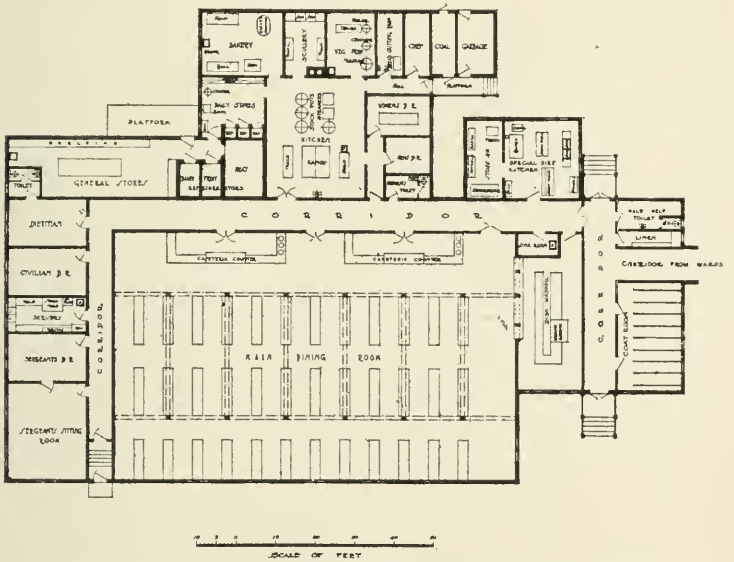


FIG. 5—GENERAL SERVICE BUILDING, CONVALESCENT HOSPITAL, STE. ANNE DE BELLEVUE, P.Q.

This arrangement of stairs was most workable, as it served to reduce the traffic through the wards, and at the same time would afford quick and easy exit in case of fire. The solarium was invariably made a most attractive lounge room, thanks to the efforts of the ladies of the local societies. As a description of this first type of unit was given in a former article it is unnecessary to go further into detail here. Suffice to say that as a first attempt it proved eminently satisfactory, so much so that duplicates were built at North Toronto and Winnipeg.

Further study of the problem, however, suggested improvements which subsequently led to certain changes in the ward unit plan. The first development was incorporated in the next group of ward buildings erected at Camphill. (See Fig. No. 2.) Instead of the long ward, the floor space was divided into two self-contained wards of 37 beds each, with its full complement of nurses' and utility rooms, while the connecting corridor, instead of being at one end, was made to connect the units midway in their length. The advantages were manifest. The smaller number of patients in a ward made for better discipline and efficiency generally. This second plan was followed in some of the new wards at Cobourg and Ste. Anne de Bellevue. While very compact and workable, even this plan was found to be capable of improvement, and a third development was worked out. This last change made for economy, but it is still an open question whether it did not possess disadvantages sufficient to outweigh this feature. (See Fig. No. 3.) In this plan the nurses' and orderlies' rooms were left adjoining the ward, but all toilet and utility rooms were placed in a small separate building, a sort of enlargement of the through corridor. The chief improvement was in the farther removal from the wards of the odors from the diet kitchen, toilets, etc., but to offset this was the disadvantage of the distance the meals and other bed services had to be carried.

General Service Buildings.

One important feature of all the larger groups was the general service building, containing the kitchens with all accessory rooms, and dining-rooms. These buildings represented much study, and passed through several stages of development with each successive step making for a more workable and better systematized plan. The first was erected at the Davisville Hospital in North Toronto and consisted of a large kitchen containing the necessary equipment for preparing and cooking the food, and washing and sterilizing the dishes. The only additional rooms were for cold storage and garbage disposal. The main dining-room had a seating capacity equal to two-thirds of the total number of patients,

and adjoining were separate dining-rooms for nurses, orderlies, medical officers, etc.

At Fredericton and Ste. Anne de Bellevue this scheme was enlarged. (See Figs. No. 5 and 6.) The main kitchen contained only the ranges and other cooking equipment, while the food preparation, the bakery, dishwashing, refrigeration,

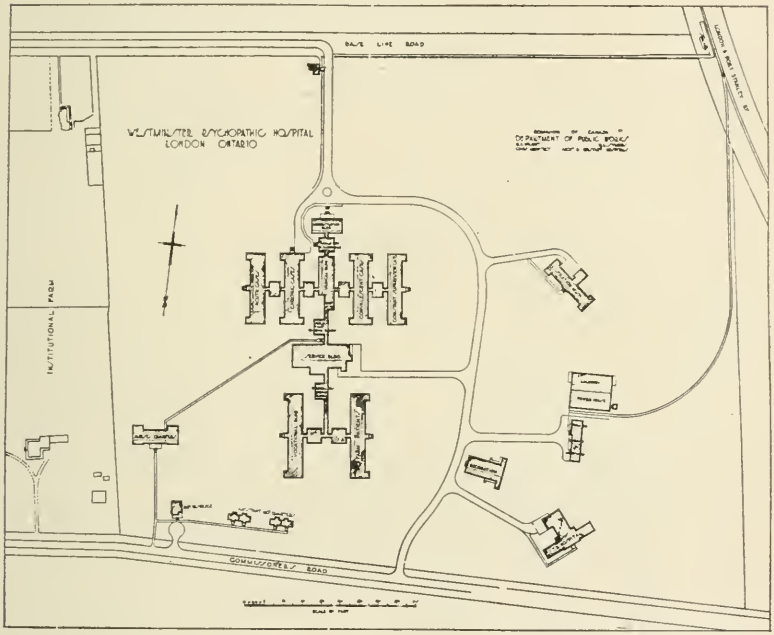


FIG. 7—BLOCK PLAN, PSYCHOPATHIC HOSPITAL, LONDON, ONT.

general stores, and garbage disposal had each a separate room opening off the main kitchen. As may be seen on the detailed plans, the main kitchen is lighted with clerestorey windows which provide excellent light as well as ventilation. The working equipment is of standard hotel heavy duty type, consisting of ranges, steam cookers, steam heated stock pots, steam tables, motor-driven vegetable peelers and food choppers, and for centres where the population exceeded 250, motor-driven dishwashing machines were installed.

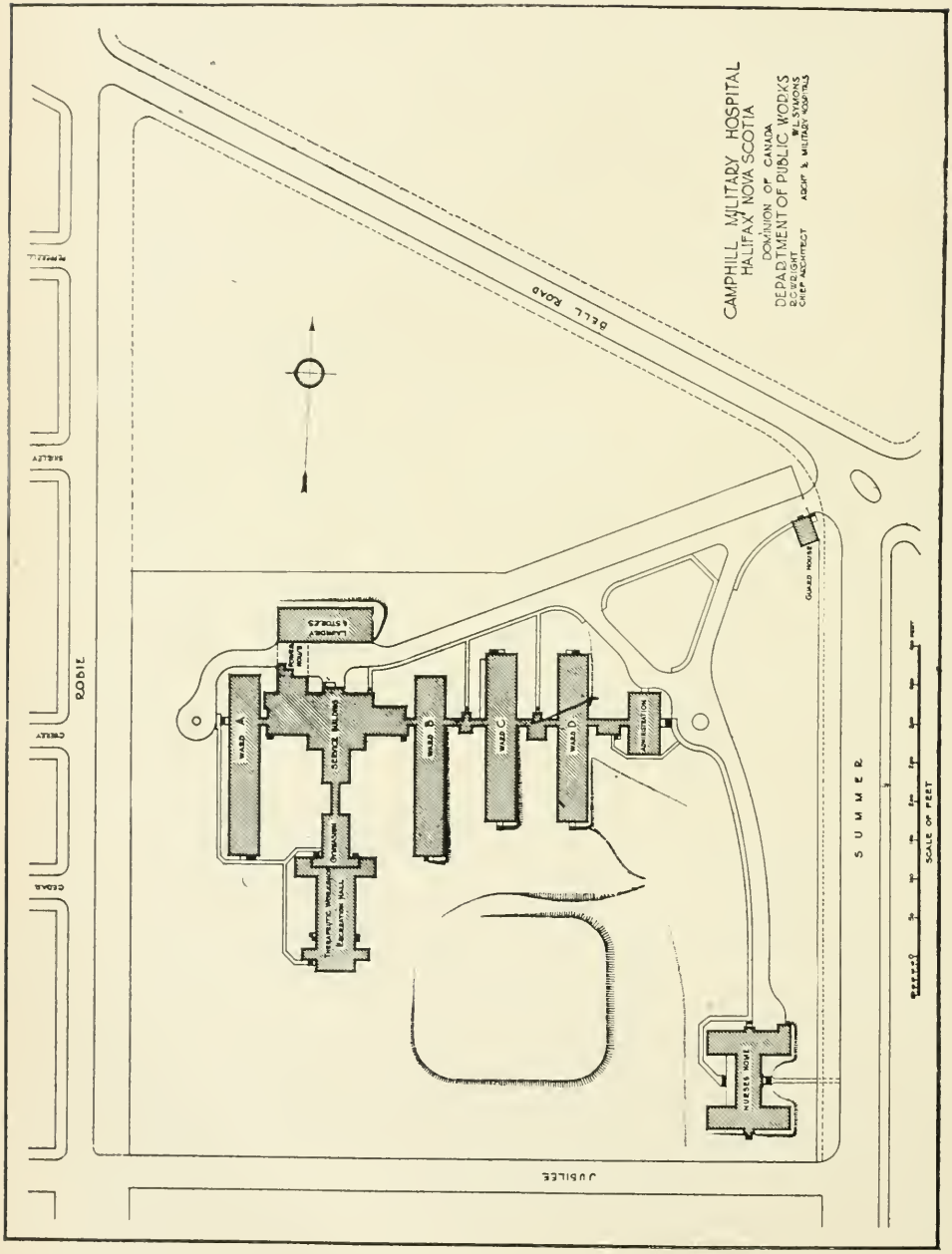


FIG. 8—BLOCK PLAN, CAMPHILL MILITARY HOSPITAL, HALIFAX, N.S

The necessity of feeding a large number of men in a short time gave rise to the introduction of a cafeteria service. This innovation was first introduced at the Discharge Depots at Halifax and Quebec where all convalescents were cleared from inbound ships, as many as fifteen hundred patients being served at a single meal. The system worked so successfully here that it was thought wise to install it in some of the larger hospitals, such as Ste. Anne de Bellevue, where as many as seven hundred patients were often served.

At the larger centres refrigerating plants have been installed for cooling purposes and for the production of artificial ice. Also fully equipped steam laundries were provided, including steam sterilizers for bedding and clothing.

Medical and Surgical Departments.

The development outlined in the planning of the ward pavilions and service buildings also occurred in regard to the accommodation required for the various branches of medical and surgical work. As for instance, the laboratory department was originally housed in one room, but eventually the necessities of this department could only be met by the erection of a separate building. The same may be said of the accommodation for the dental service, X-ray, electrical treatment department and massage department.

The requirements consequent on research in these departments were developed so rapidly and were of such importance that in each case special rooms and equipment were found necessary, and subsequently each required a building for its own use.

Nor has the scientific equipment been neglected. On the contrary every department has been planned and outfitted along the most scientific lines known to the medical profession.

The surgical buildings contain, in addition to most up-to-date operating rooms, all the complementary rooms, such as preparation, sterilizing, X-ray, etc. There is also the necessary provision for the treatment of nose, ear and throat cases, and up-to-date dental suites. One of the most interesting features is the hydro-therapy department with its full comple-

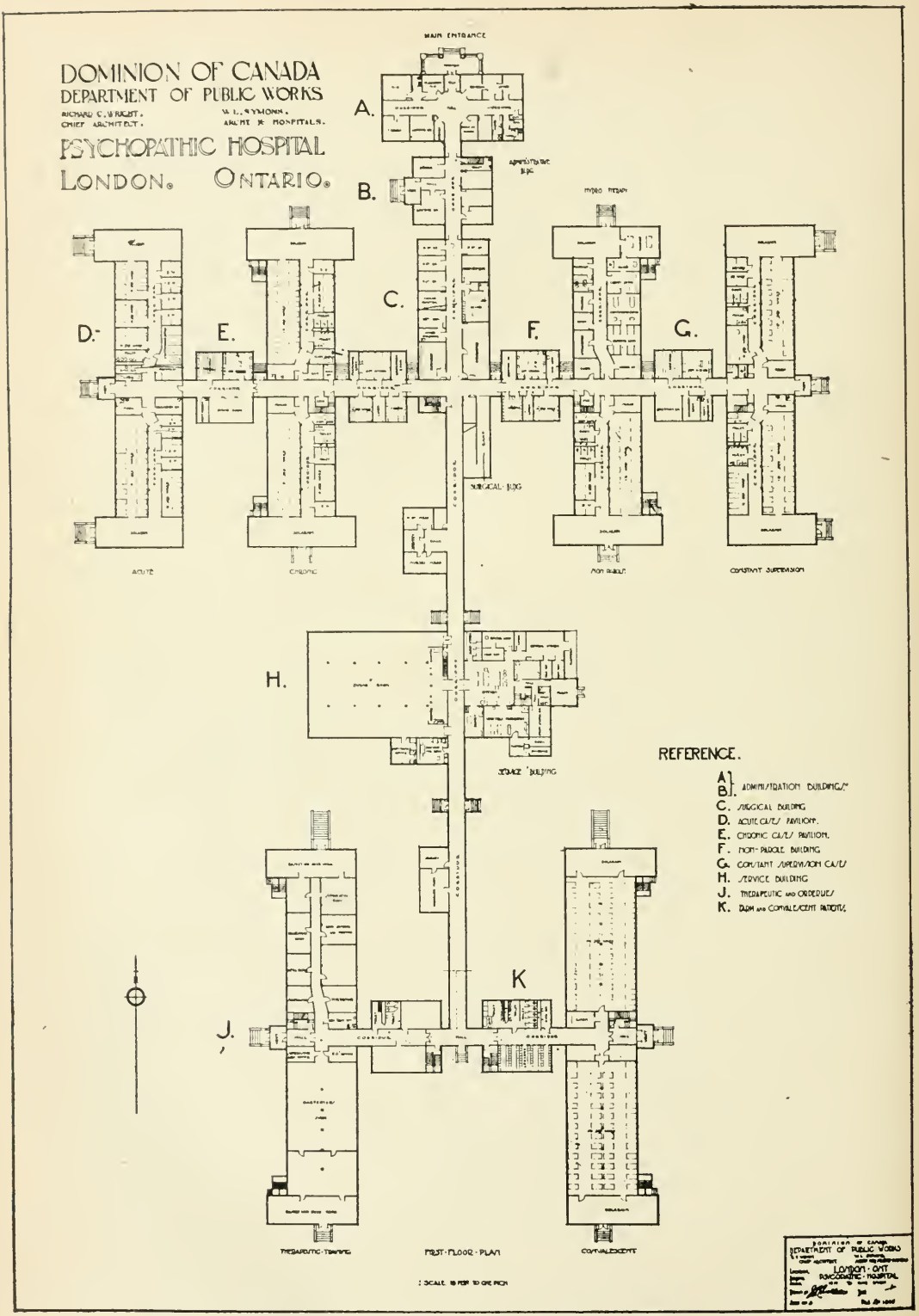


FIG. 9—FIRST FLOOR PLAN, PSYCHOPATHIC HOSPITAL, LONDON, ONT.



DINING ROOM, STE. ANNE DE BELLEVUE, P.Q.

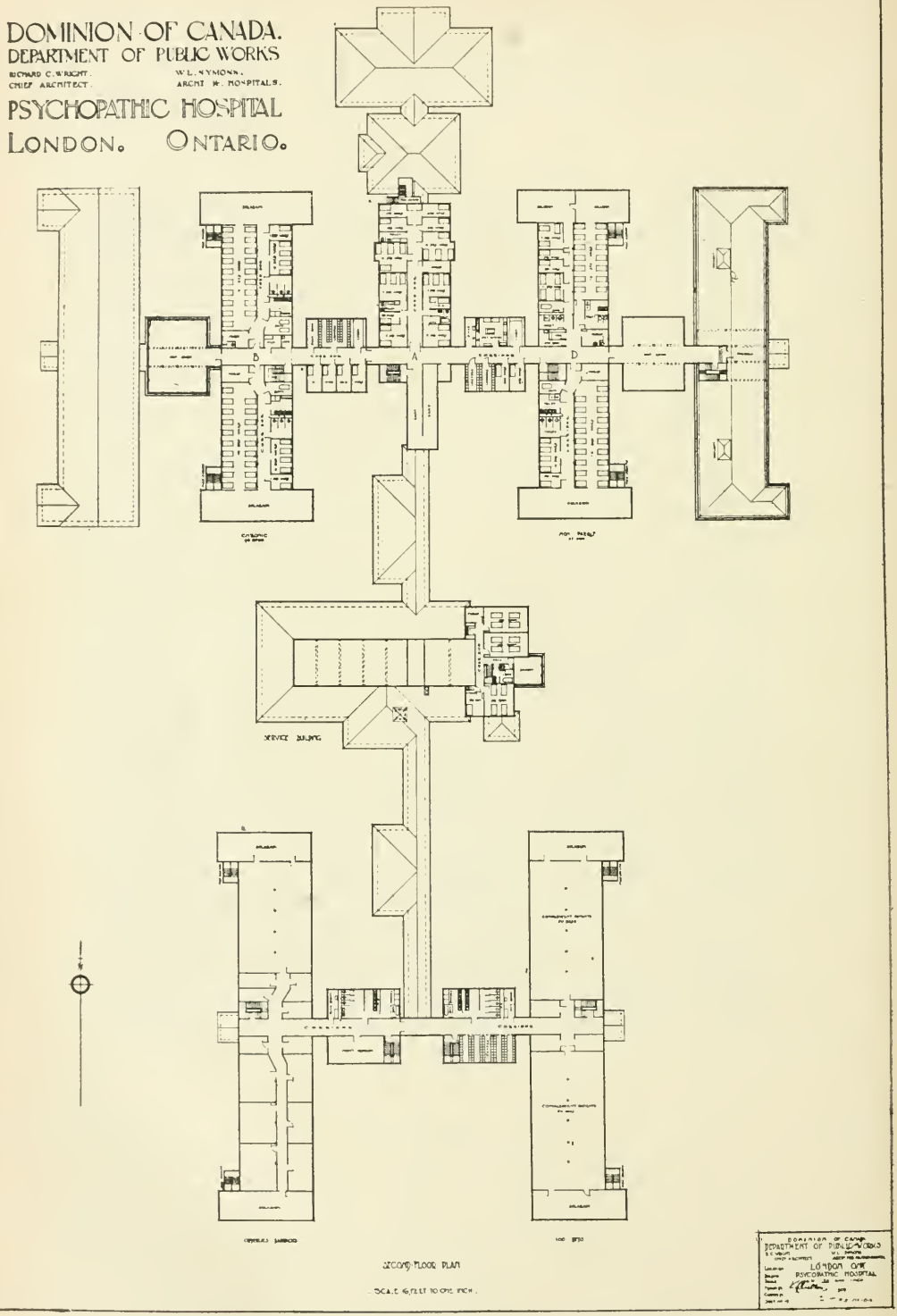


FIG. 10—SECOND FLOOR PLAN, PSYCHOPATHIC HOSPITAL, LONDON, ONT.

ment of electrical, continuous hot and cold water and arm and leg baths. These rooms are immaculate in white tile, marble, and white enamel paint, and the equipment is the best that science has produced.

While endeavoring to evolve the best methods for restoring the health of the patient through modern equipment and efficient service, the thought was ever uppermost in the minds of all concerned as to their future welfare. This instituted what is known as the Vocational Branch under whose supervision was the work of industrial re-training and occupational therapy. This endeavored to reach beyond the physical aid and presented a two-fold value in that it aided recovery as well as equipping the patient for useful service after leaving the hospital.

Not the least interesting phase of the designing of these hospitals has been the grouping of the buildings. Every site, of course, presented its own problems, and the study given to the Block plan has contributed in no small degree to the successful working out of the schemes.

From the illustrations (see Figs 7, 8, 11) it will be noted that no two are alike, or even similar, while they all embody the same general requirements.

There is the main approach, with in most cases the guard house. Then the administration building around which the others are grouped, and in which accommodation is provided for the Officer Commanding and his staff, the matron, bursar, etc.; the service building containing the kitchen and dining-rooms, and the required number of ward buildings. The several units of this main group are all connected by corridors or covered ways, and then around this, conveniently placed on the site, are the homes for nurses, orderlies, medical officers, and at the larger centres a recreation building and vocational training building.

As the reader can readily realize, one big problem in our rigorous climate was that of heating, and the manner in which that problem has been overcome is one of the noteworthy features of these institutions. The buildings are all heated by steam supplied through tunnels from a central heating and power plant.

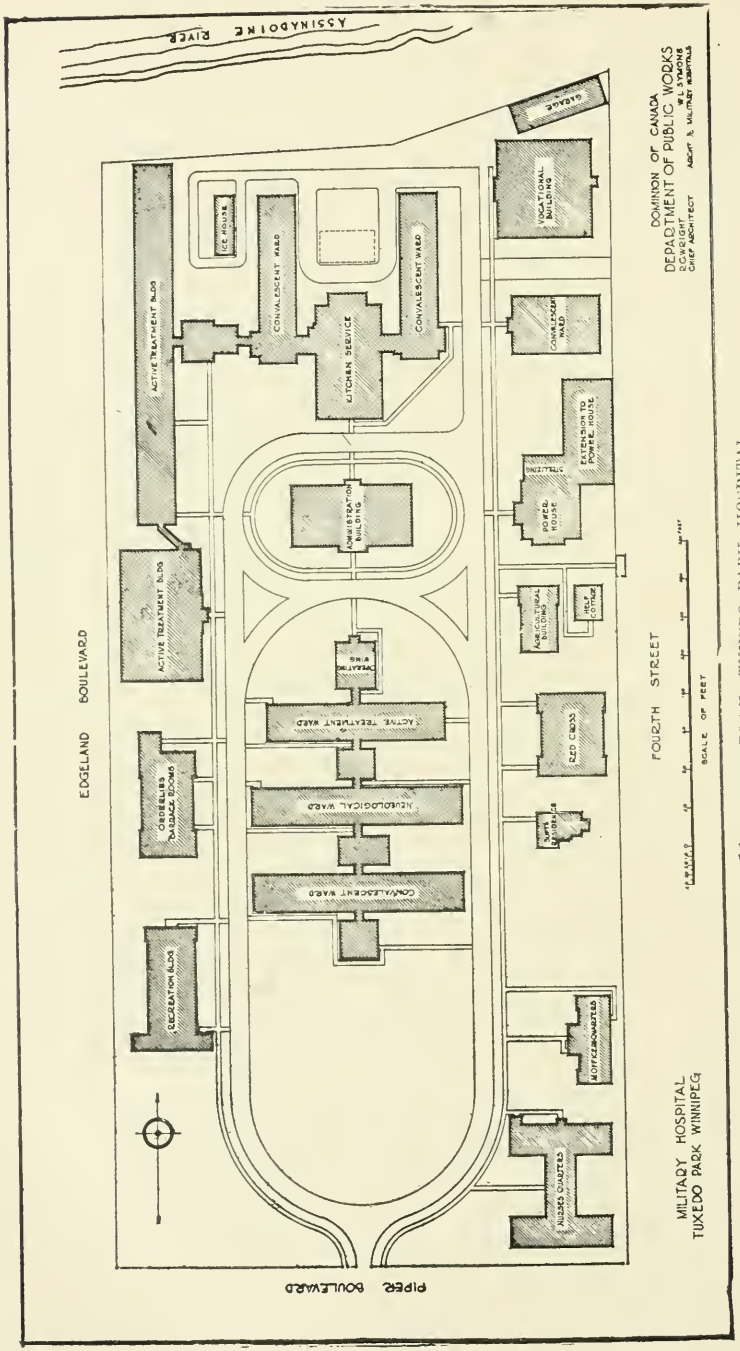
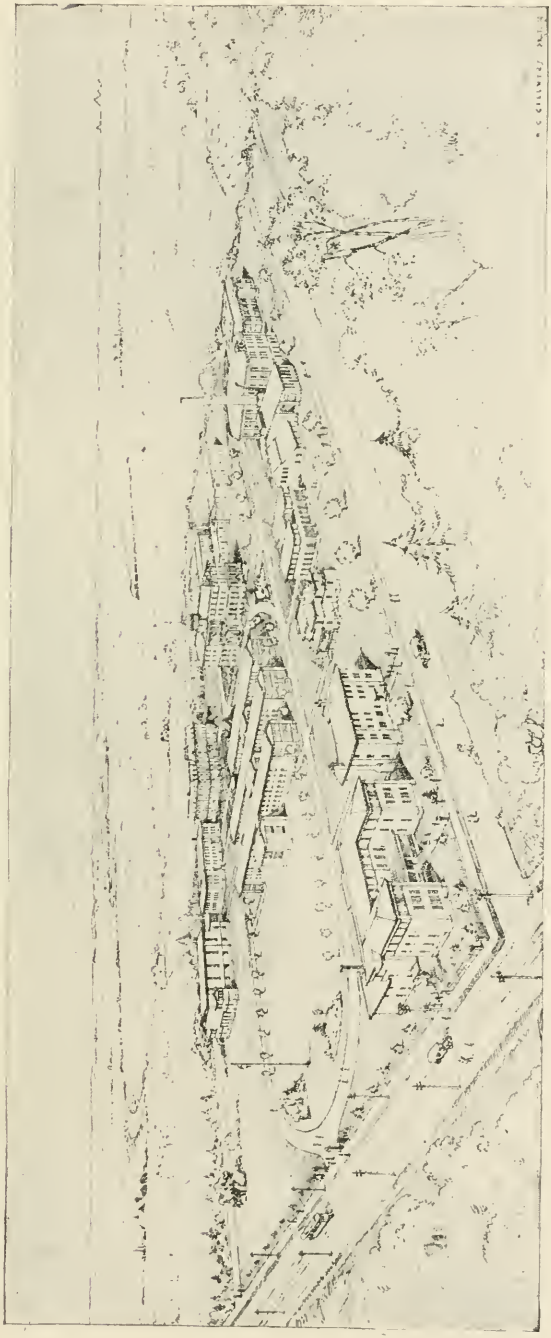
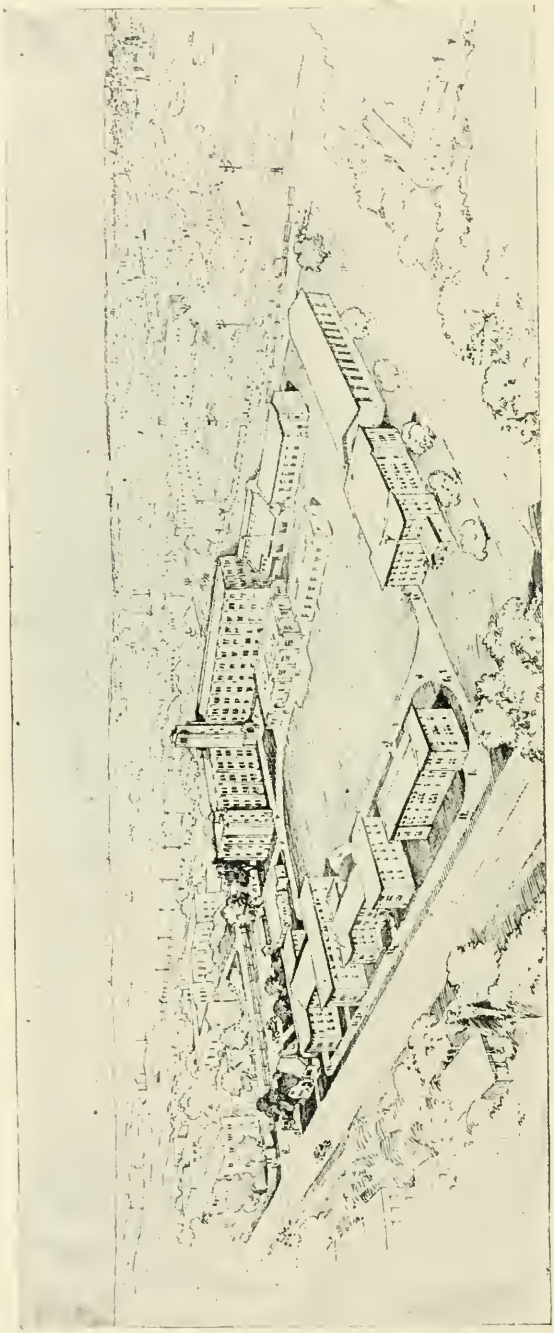


FIG. 11—BLOCK PLAN, TUXEDO PARK HOSPITAL.



TUXEDO PARK MILITARY HOSPITAL, WINNIPEG, MANITOBA.



TORONTO ORTHOPEDIC MILITARY HOSPITAL.

To solve the fuel supply question an effort was always made to locate on or close to a railway siding. The most unique case is at Ste. Anne de Bellevue where the tracks are laid right over the coal bunkers. Then, too, there were other engineering problems. If the hospital was located within, or adjacent to a municipality having all the public utilities, the question of water, light, sewage disposal, etc., were simple; otherwise systems had to be installed in connection with the central heating plant.

The esthetic has not been overlooked in the attempt to secure the best results, and the most possible has been made of the simple materials used. The color scheme in general use is as follows: In the wards the main walls are a light buff, with dado a deep buff and ceilings cream. In the utility rooms the woodwork is finished in dead white enamel, while the nurses' rooms are treated with various shades of sage green, light delf blues, etc. The kitchens and service rooms are finished in flat cream white, and dining-rooms generally in tones of sage green and brown.

The buildings erected at London for psychiatric work deserve a passing note. As this institution was to be permanent, a greater efficiency in planning was aimed at, and the plans evolved were made in consultation with experts in that particular work.

The Dominion Orthopedic Hospital in Toronto is also regarded as a permanent institution. The orthopedic cases not only receive treatment, whether surgical, electric or massage, but all appliances requisite for each separate case are made here. In planning the main hospital building the architects were in constant advice with experts in orthopedic work; the plan thus evolved will prove of interest to those specializing in orthopedic cases.

Besides the special accommodation for psychiatric work at London, and the orthopedic work at the Hospital in Toronto, accommodation was also provided at Ste. Anne de Bellevue for oral and facial cases.

The buildings required for the care of the tuberculosis patients call for a separate article, but it may be mentioned in



GYMNASIUM, TORONTO ORTHOPEDIC MILITARY HOSPITAL.



OPERATING ROOM, TORONTO ORTHOPEDIC MILITARY HOSPITAL.

passing that accommodation for 750 patients was erected by this department exclusive of the additional buildings erected in connection with the provincial sanatoria.

It is indeed gratifying to know that the design of the military hospitals has been so thoroughly worked out as to command the attention of other countries. Especially is it pleasing when one realizes that this large problem had to be solved in the western hemisphere without any precedent. Our friends to the south have more than once expressed their appreciation of Canada's work in this direction and frankly admit the value accruing to them from her painstaking efforts. This is due wholly to our early advent into the war which furnished the opportunity of demonstrating our ability to grasp a problem of such magnitude in a broad and wholesome manner.

The task demanded speed and thoroughness. It was not sufficient, in itself, to provide merely a shelter—the relation of the patient, food and treatment had to be considered with the fewest possible intervening motions. The site with its environment, its accessibility to friends and visiting physicians; its remoteness from disturbing influences; its privacy, was another potent factor. The impression conveyed by the appearance of the buildings as well as their general relation to each other was only another of the essential considerations. These, with many others made the matter in hand a stupendous undertaking and brings just credit to the Canadian people through the successful efforts of those upon whom this burden fell.

In other words, the military hospital work in Canada was a problem of its own, and very little assistance in its development could be obtained by studying the buildings in France or England, and the Americans were too late in the war to be of any service in this respect. They developed a one-storey hospital scheme when later it was realized that two-storey buildings were more adaptable on account of administration, maintenance and cost of erection, while in Canada the first pavilions erected were two storeys, and this scheme was carried out through the entire war time, the original plans only being altered from time to time as new requirements arose.



RECREATION HALL, TORONTO ORTHOPEDIC MILITARY HOSPITAL.



X-RAY OPERATING ROOM. TORONTO ORTHOPEDIC MILITARY HOSPITAL.

Cost Per Patient's Bed.

The cost of the buildings per patient's bed in the hospitals was approximately $1,650, in this cost being included the pro rata portion of all buildings on the campus, and all utilities such as heat, light and water service, and also grading, road making and fencing. The cost of the hospital at London, on account of being of more permanent construction was about $2,500 per bed.

In regard to the cubic contents of the wards per bed, an average of 650 cubic feet per patient at least was maintained at all centres, and a window surface of 25 per cent. of the total wall space in each ward.

Some idea of the extent of the programme of military hospitals work may be obtained when it is realized that about $15,000,000 has been spent by the Government in this work, the bulk of the buildings being erected and equipped in the short space of eighteen months' time and that this work was carried on in over eighty different hospital centres in cities and towns throughout the Dominion.

Summary.

Considering the magnitude of the project and the manifold and varied problems entering into it, the erections of war time hospitals, especially in connection with the planning of the various departments, presents certain experiences which should have an important bearing on future hospital design in general. One of the most outstanding of these was constant changes in plan necessitated by the wonderful strides made during the war in all branches of hospital work itself. This was very noticeable in the X-ray and electrical treatment departments, and also the hydrotherapy and massage departments and equally noticeable in the application of the work of these branches to psychiatric work, and in a lesser extent to that for tuberculosis treatment.

The development in providing for the housing and treatment of infectious diseases should prove of interest and value, and also that for the venereal hospitals which were almost un-



MASSAGE DEPARTMENT.



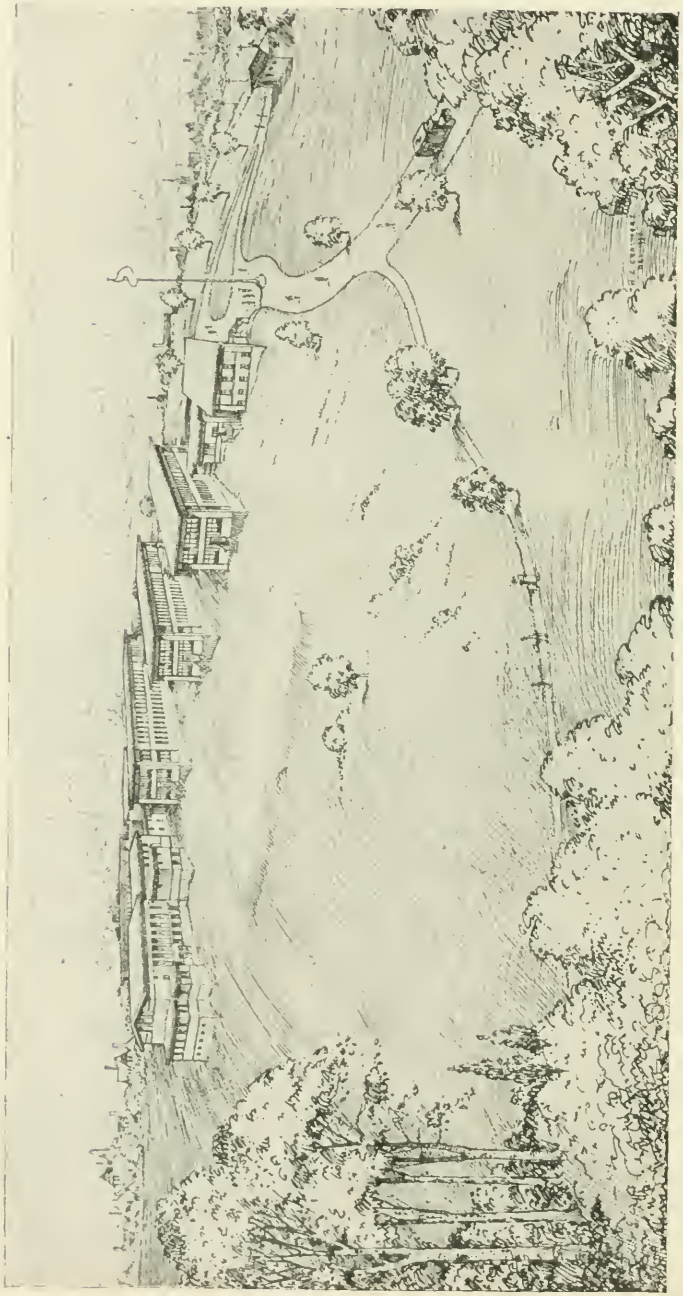
ARM AND LEG BATH AND CONTINUOUS BATHS, HYDROTHERAPY DEPARTMENT.

known before this time, and consequently may be termed a war product.

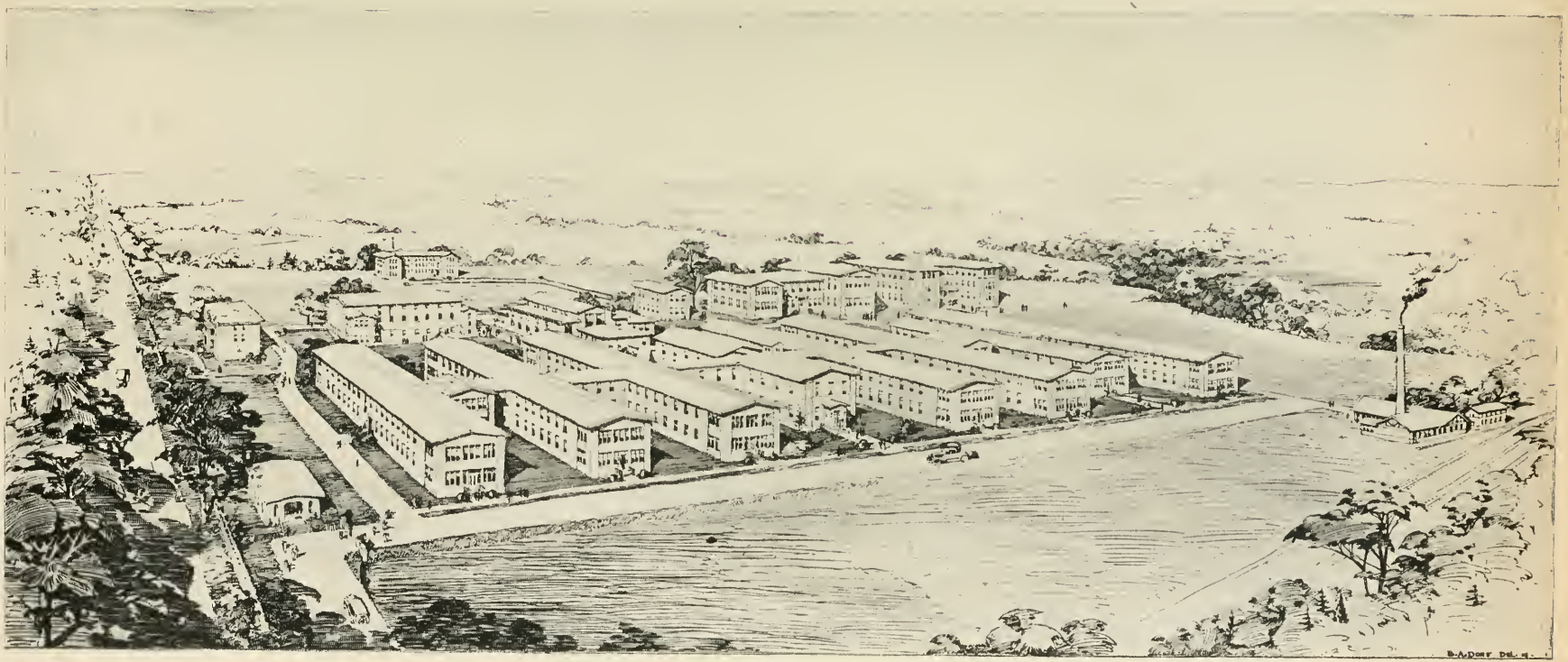
The application of vocational training to mental and tubercular patients has necessitated considerable space being set apart for this important work, in some cases separate buildings being erected, while the provision of special gymnasia in connection with orthopedic hospitals has opened up an entirely new study.

The question arises as to how far it is desirable to erect expensive buildings such as five and six-storey fireproof structures, in view of the fact that the requirements in the various departments are far from being standardized. Even the question of ward planning is still a much discussed one among medical men. Some leading doctors quite firmly maintain that the erection of two or three-storey buildings of slow burning construction is to be recommended, so planned as to be easily and quickly altered to suit important changes which are subsequently found to be necessary and desirable. In fact it is now quite fully realized that the plant and equipment of mental and tubercular sanitariums erected even as recently as ten years ago, and carefully planned at the time, fail in a large measure to meet present hospital requirements, and on account of the initial cost of the original structures, which in most cases still bears heavily against them, the administrators of these buildings find it both difficult and costly to carry out alterations desired by the medical advisers.

Consequently in the interests of economy and effective administration it would seem that the lesson to be learned from the erection of military hospitals in Canada is the suitability of two-storey and basement buildings for hospital work of all kinds. The low cost of $1,650 per bed for heavy wooden construction and $2,300 per bed for slow burning construction (this is war-time cost), combined with the ease and cost of administration if the buildings are properly placed in relation to each other, and the apparent low fire hazard as indicated by the fact that no loss of life or property damage from fire has been sustained during the time these hospital units have been in operation, all constitute arguments that favor large acreage for hospital sites and two or three-storey buildings.



CAMPHILL, HALIFAX, N.S.



Page 109—Can. Journal of Med. and Surg., Aug., 1920.

STE. ANNE DE BELLEVUE, P.Q.

Besides this there is another reason why these buildings should have considerable effect on future civic hospital planning and equipment, and that is the fact that they were erected, equipped and maintained out of Government monies and were thus not dependent upon civic or personal donations. Advantage was therefore taken of this fact, especially as regards equipment, to have the best that scientific research could devise or provide for the aid and recovery of the large number of patients receiving treatment. New standards have consequently been created both as regards planning and equipping which are at least revolutionary, and which will undoubtedly greatly influence all future work along these lines.

Very little loss, if any, will ensue in Canada chargeable against the expenditure of fifteen million dollars for military hospitals, as most of the buildings have been erected on permanent foundations and in such a manner as to admit of the future exterior facing of stone or brick to the upper storeys. Some hospital centres will be turned into military hospitals and barracks for the Permanent Force, others will be taken over for special work, such as mental hospitals for women and children, and altogether their planning, construction and equipment will demand that they be utilized for some good service.

In other words Canadian citizens have every reason to be grateful to find that after the "smoke of battle" they have such an unimpaired asset, in that these buildings besides fulfilling the needs of the purpose for which they were erected, have been so carried out as to enable them to successfully serve a more general use which in every way renders them of permanent value.

DR. BRUCE DECORATED

Word has been received that the King of the Belgians has conferred upon Dr. Herbert Bruce, of Toronto, the Order of the Crown (Chevalier) "in recognition of his generous services toward Belgium during the war."

COMMERCIAL DEPARTMENT

THE BRITISH MEDICAL ASSOCIATION

One of the finest exhibits made by any commercial firm at the recent meeting of the British Medical Association at Cambridge, was that of Oppenheimer, Son & Co., Limited, London. Of recent months a great deal of interest has been aroused in the subject of Vitamines. The Oppenheimer firm have in their preparation, Roboleine, a product of very considerable therapeutic value, containing in a concentrated form the three Vitamines, "A," "B" and "C." It has been clearly demonstrated by many authorities that the Red Marrow from the bones of animals contains a large percentage of the "A" fat soluble Vitamine. The water soluble Vitamine "B" is found in considerable quantity in Extract of Germinated Grain, and in association to secure the Anti-Scorbutic Vitamine "C," the firm have amalgamated with the other material an Extract of Vegetable Substances very carefully prepared at a temperature not exceeding that of the human body of normal condition, so that therefore in Roboleine there is an association of these three Vitamines which produces the very best results. The firm also exhibited a full line of Oscols, which are the result of the most careful research in connection with Colloid. Oppenheimer, Son & Co. are now manufacturing the following Oscols: argentum, arsenium, cuprum, ferrum, hydrargyrum, iodum, magnesium, manganesium, palladium, selenium, stibium, sulphur and sulphur fortis. They are very carefully prepared under the direction of experts and most carefully standardized by means of the ultra-microscope before they are issued so as to prevent the possibility of any parcel of these Colloids being sent out after they have prematurely broken down. Considerable interest was also aroused in the series of inhalation apparatus that was exhibited, particularly the Universal Vaporiser and Aeriser. The late Sir Lauder Brunton in his text book, "The Action of Medicine," drew particular attention to the fact that by the method adopted in the construc-

tion of these two inhalers, the Neboline Compounds, oily and spirituous, were reduced to the condition of absolute vapor without heat, so that the patient was enabled to inhale the same into the more remote parts of the respiratory tract. The firm are to be congratulated upon the exhibit they made. Mr. M. E. VanZant, 732 Yonge Street, Toronto, Canadian agent, will be glad to supply physicians with any literature they may desire.

THE IODINE VOGUE

Almost every issue of most medical journals contains some references to the use of iodine in some form or other. The extended use of drugs form an interesting feature of medical journalism, and the regular reader will have noticed the ever-increasing uses for free iodine, which have been recently chronicled. Extended usefulness and greater degree of purity, or improvement of form of a drug, generally go hand in hand in therapeutic progress.

During the period before the introduction of Iodex—a name synonymous with Ideal Iodine for External use—the hardening, irritating, diesquamating and corrosive effects which accompanied the use of *free* iodine—and indeed made its application to mucous surfaces ill-advised in many instances—shut it out almost entirely from cases where its known beneficial qualities would have been of immense value could they have been employed.

Since the introduction of Iodex, and due to it, a much wider field has opened up and *free* Iodine can now be used where it was quite inadmissible before for the reasons already stated.

What a wide therapeutic vista presents itself to untrammeled Iodine! Ulceration treated and cured by the powerfully antiseptic action of iodine; Parasitic Skin Lesions with mucous patches treated and cured by its anti-parasitic properties; Enlarged Glands dispersed by its absorptive action without intermissions in treatment; Syphilitic Rashes banished; Gummata resolved in a few days; Septic Inflammations rapidly brought to an end—and so on. Incredible, perhaps, with the usual

effects produced by Iodine in mind, but not impossible with Iodine rightly presented, when it is remembered what therapeutic properties Free Iodine undoubtedly possesses.

Many attempts to employ free iodine in connection with the treatment of abnormal rectal and vaginal conditions have hitherto been frustrated by the characteristic disadvantages and drawbacks of iodine which may be summed up in the words—too irritating and too hardening. The introduction of Iodex in Suppository and Pessary form, enables iodine to be freely employed in abnormal rectal and vaginal conditions, where the employment of *Free Iodine*—freed from all its irritating and corrosive effect—is advantageous.

Iodex Suppositories and Pessaries are bland in action; they are antiseptic, healing and absorptive and allay inflammatory conditions—alleviating soreness and irritation. They readily dissolve, spreading free—yet innocuous—iodine over the affected tissues.

These products give excellent results in: Fissures of the Anus, Hemorrhoids, Rectal Neuralgia, Fistula, Pruritus Ani, Rectal Ulcer, Acute Vaginitis, Chronic Vaginitis, Cervicitis, Puerperal Inflammation, Parametritis, Salpingitis, Gonorrhea, Ovaritis, Chronic Pelvic Inflammation, in fact, all Inflammatory Rectal and Vaginal conditions, and for Post-Operative treatment.

Parasitic Skin Diseases benefit from the use of *free* iodine in the form of Iodex, which can be employed with great advantage. In these diseases—and especially those cases in which the infective agent is seated in the deeper parts of the hair follicle—the superior penetrating and antiseptic power of Iodex is very desirable; it is far superior in action to the older preparations of iodine whose penetrability is very limited; moreover, treatment by Iodex is painless and convenient. Ringworm and Sycosis and the rarer forms of parasitic skin diseases yield rapidly to treatment by Iodex.

In surgery, the method of employing *free* iodine, through the medium of Iodex, is both successful and advantageous. It is unirritating to the living tissues and rapidly tends to destroy

septic processes in the living body. Both in pre-operative and post-operative treatment this product is advantageous and the successes which have attended its use have influenced changes in surgical technique. As an example, we may cite its use in Septic Abscesses. After operation, septic abscesses packed with gauze liberally smeared with Iodex, heal in about one-third of the time anticipated and the treatment is painless. Similar instances of the employment of this new form of *free* iodine might be multiplied.—*Topical Therapy,* London, England.

WHY WOMEN SMOKE

A WOMAN writer in a London newspaper explains that women smoke for other reasons than the mere liking for tobacco. She says of smoking: "It promotes talk; it is a delicate and ideal stop-gap between sentences; it is a kind of pledge and sacrament of good fellowship." There are, of course, various ways of enjoying tobacco, and women these days can make their choice. They have shown good judgment in choosing the cigarette, for it is the daintiest and most delightful form of smoke.

THE TREATMENT OF SYPHILIS

A VERY valuable and interesting work has just been published by The Macmillan Co., New York. It is entitled "The Treatment of Syphilis," and is from the pen of H. Sheridan Baketel, A.M., M.D. The volume covers very thoroughly and convincingly the field of intravenous and intramuscular medication, and the administration of arsphenamine or neoarsphenamine. It gives in minutiæ, step by step, the proper methods for the actual introduction of arsenical products into the system.

Speaking of the after treatment in cases where intramuscular injections have been given, the author says:

"In England and on the Continent it is the habit, after giving an intramuscular injection, to cover the surrounding parts with sterilized absorbent cotton fixed with elastic collodion. The patients were instructed to rest in bed for twenty-four hours

and according to various reports, the majority of them complained only of stiffness in the hip and thigh and occasionally of pain in the lower extremity.

"Some physicians also utilize a clay dressing, like antiphlogistine, in place of cotton. It is their custom to cover the entire gluteal surface with a thick layer of properly heated antiphlogistine and to cover this with gauze, and over that absorbent cotton. This application seems to work well following the intramuscular injection, and not only aids in the prevention of pain and to a considerable extent prevents any abscess formation, but enables the patient to attend to his ordinary affairs."

Dr. Baketel is Professor of Preventive Medicine and Hygiene and Lecturer on Genito-Urinary Diseases and Syphilis in the Long Island College Hospital, Brooklyn, N.Y.; Attending Syphilologist and Chief of Clinics at Volunteer Hospital, New York; Genito-Urinary Surgeon to the House of Relief of the New York Hospital, Lt.-Col. Medical Reserve Corps, U. S. Army, etc., etc.

ARTERIAL HYPERTENSION

Do you test the blood pressure of the average patient? It is surprising how many people show abnormal tension, the result of overwork, excess of eating or drinking, intestinal factors, syphilis, house heating, etc. This condition is said to demand specific treatment whatever the underlying clinical picture may be. In an excellent little treatise on "High Blood Pressure," Dr. M. Clayton Thrush relates his success in the use of a combination of well known pressure-reducing agents, with heart tonic to forestall shock. With this treatment, he says, "I have obtained excellent results in practically every case." Other clinicians quoted in the treatise speak with equal enthusiasm of their own experience with this remedy in bringing down the pressure to the level that is appropriate for the case in hand, incidentally relieving other distressing symptoms. A copy of this treatise may be had by writing to The Drug Products Co., Inc., 48-52 West 4th Street, New York, N.Y.

AN IDEAL RESORT FOR CONVALESCENT PATIENTS

Physicians have frequent opportunities of referring those convalescing from illness to a resort where they can quickly recover their old-time vigor and enjoy an almost ideal climate, 2,500 feet above sea level. Such a resort is Virginia Hot Springs, just one night out of New York. The management have spent a huge sum of money on this choice spot in "Old Virginny," and are anxious that the Canadian medical profession should continue to refer cases there, as they have done in years gone by. The Homestead Hotel is one of the handsomest houses in America. It is built of solid brick, containing 500 guest rooms, with many parlor suites and 300 private baths. It is spacious, dignified, quiet and restful, with magnificent mountain views on every side. It is no exaggeration to say that Hot Springs means the Homestead Hotel. The Company owns 5,000 acres surrounding the hotel, so that physicians can understand that their patients have every opportunity of enjoying outdoor life and regaining thereby their normal strength.

The dominant factor making Hot Springs world-famous is the cure in which the climate as well as the water assist. The waters are conducted by gravity to the bathhouse and distributed fresh from the ground to the bathing apartments on different floors without loss of heat or its increase by artificial means, and fully charged with all their gases and other health-giving qualities. At none of the celebrated places in Europe, and at no other springs in America, is the temperature prescribed for hot baths that at which the water actually emerges from the earth in the natural springs.

The springs are beneficial, not only for bathing, but for drinking. Besides the hot springs, the effects of which as drinking waters are pronounced, there are magnesia, sulphur, and soda springs within the grounds, and alum water from a spring not far distant. The water from the soda spring comes strong and clear from the ground at a uniform temperature of 74 degrees. Physicians should address for full information Christian S. Andersen, Esq.

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Editorial

BROADENING THE MEDICAL COURSE

It is proposed to lengthen and broaden (and deepen, we hope) the medical course in Toronto University —to allow more time for clinical instruction, introduce some new and optional courses (both scientific and cultural). By doing this it is hoped to conform with the custom of other countries. It is hoped to provide a start for intending specialists.

The proponents of this new plan aim to train the student to think scientifically and to acquire knowledge of essential facts and technical processes necessary to practise. They hope to make every graduate an original investigator. The physician has to deal with a complicated type of problem, embracing processes chemical, physical, biological and psychological. Hence he must be well trained in these subjects. Besides, he should have a broad education in the humanities; for his science must

be tempered by a sympathetic understanding of human nature. In short, as Prof. J. J. R. MacLeod (whose article in the University of Toronto *Monthly* we are summarizing) says, the young medical graduate must go forth into the world adequately prepared both professionally and scholastically.

Biology, physics and chemistry, commenced in high school, should occupy the main part of a complete year's instruction. There should be no sudden break between the high school studies and those of the medical college. It is essential to correlate studies of different types so that the student may be trained to utilize to full advantage all the knowledge with which he is familiar. The application of this principle in the United States has resulted in the securing of better medical students, the better teaching of bacteriology, biochemistry and pharmacology, and the graduation of men of greater breadth of vision and minds trained to independent modes of thought. To carry out this scheme the assistance of the Arts and Science Faculties is required.

Professor MacLeod contends that the practice of medicine and surgery depends on the application of the methods and laws of physics, chemistry and biology in the interpretation of disease.

Anatomy should be continued as pathology and surgical anatomy. The chemistry of the first and second years should be continued in the third as biochemistry, in the fourth as pathological chem-

istry, and should find its final application in the clinical laboratory. Physics should be continued in the second year as physical chemistry, in the third as physiologly and in the fourth as pharmacology and physical diagnosis, and in the final years receive its application in every field of medicine.

Professor MacLeod suggests that a place for cultural studies should be found during the second and third years; and at this juncture the student should be guided by some member of the Faculty in the selection of courses best suited to prepare him for his life work. The cultural and special subjects suggested are:—In the first year English, history, French or German, and mathematics; during the second year, English, history, political economy, philosophy, psychology, mathematics, and advanced work in physics and chemistry. During the third year are added economics and sociology, philosophy (logic and theory of method) and advanced courses in any of the subjects of the medical curriculum of the first three years. Dr. MacLeod puts in a strong plea for the course in psychology. Doctors are dealing with patients who are often in abnormal mental states; they should, therefore, make themselves familiar with the methods for the study of the human mind, for the interpretation of human actions and for the analysis of human intellect.

Canadian Journal of Medicine and Surgery

Toronto Canada

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

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Society Proceedings

HOSPITAL STANDARDIZATION

The following is a report (in part) of the proceedings of a meeting held in Calgary, Alta., to discuss Hospital Organization and Standardization. Dr. M. T. MacEachren, of Vancouver, called the meeting to order, and Dr. M. M. Seymour, of Regina, was in the chair.

The Chairman read a lengthy telegram from Dr. Hunter, of Manitoba, relative to rural hospitals and standardization. Dr. Hunter feared that hospital standardization would not help the small rural hospital—which is so essential in the community, and suggested considering them in a class by themselves. However, it was pointed out by the Chairman that hospital standardization would help the small rural hospital, as would likely be shown this afternoon before the session was over.

It will be seen that the morning session was merely "preliminary," with reports from various provinces upon various points. There was a little discussion, particularly upon the question of the splitting of fees amongst physicians and surgeons. This practice is strongly prohibited under the standardization scheme introduced by the American College of Surgeons, having for its objects the elimination of incompetent surgery and for the qualified surgeon who performs the major surgical work to receive the fee to which he is entitled. The Chairman of the Galt Hospital Board raised the question as to whether a man who had been a qualified surgeon and was incapacitated by his work, say had lost an arm, was not entitled to some portion of fees from the practice which he could introduce, but he was informed that, although this would be an un-

fortunate case, such a man was "down and out," and being no longer able to perform the work, was not entitled to receive pay for it.

The afternoon session was confined to the study of hospital standardization. A copy of the minimum standard suggested was presented to each present. Before proceeding to discuss this clause by clause, Dr. R. E. McKechnie, F.A.C.S., of Vancouver, who is also President of the Canadian Medical Association and Chancellor of the University of British Columbia, gave an address on hospital standardization.

Dr. R. E. McKechnie said:

"We know very well that a number of hospitals are no better than boarding houses. Their facilities are poor and everything is done in a slipshod way, and until a few years ago the only hospitals that attempted to be modern were those connected with medical colleges. The American College of Surgeons, in 1913, decided to commence a great work in trying to improve hospitals. The first thing which they did was to make a survey of the hospitals of Canada and the United States, taking particularly those of one hundred beds and over. It was hoped that a similar work could be carried on as was accomplished in connection with the medical colleges some years ago when they went under review by the Carnegie Foundation Society in both countries, and a survey was made which revealed many colleges that were not even reaching a reasonable standard. These were either improved or ceased to exist, and the same fate now hangs over some of our institutions. Everything tends towards the public paying for the upkeep of hospitals, and they will want to know that their money is well spent, and I do not think any intelligent community will object to pay for good work. Public opinion, indeed, will demand sooner or later that our institutions produce the highest standard of efficiency, and I am glad that we are analyzing our conditions to see if we are living up to this required standard.

"This great movement is now being carried on by the American College of Surgeons, a group of men from Canada and

the United States, banded together to promote the highest ideals and ethics in the practice of their profession. They have realized that the hospitals are the work-shops or laboratories for the profession and in many cases are not producing the results that their ideals or standards demand. Like good fellows they have also helped to finance the movement. Two surveys have been completed—the first in 1917, bringing a great deal of information and data from which a practical standard has been evolved. In the first survey 671 hospitals having one hundred beds or more were examined, and there were only 89 of those which could measure up to the minimum standard requirement. Under the stimulus of criticism from the profession and the public, there was brought to bear pressure on these hospitals, and at the end of the second inspection or survey, in place of 89 who qualified or measured up to the minimum standard, 198 had done so. Finally, at the end of the third survey, which will be this year, it is hoped that 400 at least will have reached it.

"What are hospitals for? Are they places for doctors to send patients in for the convenience of the doctors? Are they for the convenience of the patient or the convenience of the general public? Are the patients merely incidental? The answer may be summed up in a few words, and in a thought we must always keep before us: 'The patient is the unit of consideration at all times, and the success or efficiency of your hospital will be measured in the quality of service rendered and the product which is the end result in your patient.' The public need enlightenment along these lines so as to demand such proper conditions as are safe and good for the patient, and we are coming to that stage when the public have to take more interest in the hospitals and patients, as they are usually paying the bills and it is a practical work for them to do. Naturally they will want to know if they are getting full value for the money they are spending. Many a hospital is being run in such a way that I do not blame the public if they grudge the money that is being spent on it. No intelligent community will refuse to support the hospital which is doing good work. A large number of hospitals have been doing first-class work, meeting

their full responsibility in respect to looking after the sufferers, and these institutions are going to secure public support. Our educational propaganda will do great work in helping such a condition, and it is just as essential that the hospitals, the various members of the staff and the patients themselves, use propaganda on the public to educate them up in their duty towards the hospitals, and it is just as important that the public should bring this influence to bear on the hospital authorities and the doctors attending the various hospitals and make them do their work properly.

"We hear to-day a great deal about 'group medicine,' and I am a firm believer in it. This group I refer to would include all the doctors in the community attending the various hospitals. My interpretation is that of having the fullest facilities at the disposal of every doctor in the community where he can do full justice to the patients he is looking after. At one time there was a real necessity for small groups of men, but that group was the smallest and most selfish aspect. What we want is a scheme whereby every medical man in the profession has just as much benefit from expert opinion and advice as any member in that group would have. This can be accomplished in a hospital properly equipped with all the necessary diagnostic and treatment facilities, such as X-Ray, laboratories of all kinds, etc., all of which are necessary in a well regulated hospital. The doctors can send their patients in and take advantage of these facilities, and thus the physician or surgeon can work up his cases to the maximum and do full justice to them. Thus the humblest member of our profession—the young man just from college—can have full benefit. That is what standardization of hospitals will lead you to. It will lead you to group medicine centered around well-equipped hospitals all over the country where the whole community is going to be benefited by service spreading out from the centre to all the medical men round about. To-day there is no room for private clinics in British Columbia. Every man in the City of Vancouver has the advantage of the magnificent equipment of the General Hospital, and through such

arrangement the general standard and calibre of our medical profession is raised.

"Coming now to the question of the practice of the division of fees or fee-splitting, I may say that I do not think there is much being done in our provinces. Our profession is above this, I hope. Our friend from Lethbridge raised a question this morning which I hardly think was sufficiently answered—when he quoted the case of an eminent one-armed surgeon called in to the operation to stand by. That eminent one-armed man was entitled in the instance related to a fee exactly commensurate with the value of the service he rendered, and he was quite entitled to receive a fee for that. He was not entitled to any recompense for having lost his arm or having been deprived from earning a larger fee at this particular operation by not being able to do it. He is entitled to a just recompense for his remaining powers. Supposing an eminent violinist lost one arm and he toured the country with another violinist, giving him advice all through the concert—how much should that consulting violinist get for this work? The real work is being done by the violinist who is doing the playing. There is no consultant who can stand at a surgeon's elbow and direct him and make him do a good operation if he is a poor operator. You cannot thus stop a man from cutting a nerve or doing some irreparable damage even if you are standing at his elbow. Fee-splitting was carried on in the east with Chicago as a centre at one time to such an extent that dishonor was brought upon the medical profession. Doctors from outside districts would visit as many Chicago doctors as they could, to see which one would give them the biggest commission, and as a result of this the patient would go to the lowest bidder, who is usually an incompetent surgeon or a young fellow out of college. I have gone through the various stages in regard to this fee-splitting business and find it opens the opportunity to abuse, thus making only one remedy for it, and that is, complete abolition of it. You may say that the man who has had the previous care of the patient has perhaps worked the case up, has the right to a share in the fee which the surgeon wins with his operation, but he has

not. Each man has an absolute right to the money he has earned, and no more, and this man has a particular right to put in his own bill for his services in working the case up, but should not claim any of the operator's fee. There is a tendency towards charging excessive fees, especially by the younger practitioners, but I believe in a surgeon charging a reasonable fee commensurate with the seriousness and difficulty of the operation, and also commensurate with the ability of the patient to pay. We must prevent immature surgeons from rushing into surgery and charging fabulous sums, doing great harm to our profession. If the general practitioner had the courage to demand what he earns, so many men would not go into surgery. Finally, let us regard fee-splitting as entirely banished from our institutions, and that means that any surgeon doing work shall be paid for the work he does, and any patient paying any such bill will know for what reason he is doing so; or, in short, every man is entitled to his just fee and the collection thereof.

"In conclusion, I trust that this Conference will formulate a definite policy along the lines required and see that such a policy is duly executed to the fullest extent in all our institutions of this wonderful Western Canada of ours."

In reply to questions, the speaker stated with regard to the payment of the assistant surgeon he may have brought in the case, under the American College of Surgeons' ruling each man collects his own fee and each man runs his own chance.

In hospitals where no pathological expert exists, specimens could be sent to the central or divisional laboratory in the Province of Alberta; for instance, specimens may be sent to the University at Edmonton, and Dr. Rankin has promised to do pathological work there free of charge.

The Chairman now threw the meeting open for discussion, and several persons raised certain questions and spoke briefly.

Mayor W. D. L. Hardie, of Lethbridge, and President of the Galt Hospital Board, was very much interested in the paper which had been read, particularly that in regard to division of fees, since there seemed to be such a number of interpretations of this practice. Explanations were given by Dr. R.



A Hospital Entrance in Central Europe.



A Hospital Model.

E. McKechnie and others, and this matter made very clear to all. Drs. Stephens, Gibson, and others also took part in the discussion.

The Chairman remarked that he felt that the splendid papers and discussion that followed should not be allowed to be passed on unheeded, and that it would be wise to have a Resolution Committee formed to make note of any resolutions which arose from time to time and formulate them into a constructive policy. In accordance with that he appointed the following:—

Dr. M. T. MacEachern, British Columbia
Dr. L. S. Mackid and Alderman McTaggart, Alberta
Dr. G. R. Peterson, Saskatchewan
Dr. George Stephens, Manitoba

to act as a Resolution Committee and report later to the meeting.

The Secretary now read the minimum standard requirement as laid down by the American College of Surgeons, and recommended for adoption throughout Canada and the United States. Clause by clause was dealt with and discussed and finally moved and adopted.

Clause 1. That physicians and surgeons privileged to practise in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word "staff" is here defined as the group of doctors who practise in the hospital, inclusive of all groups such as the "regular staff," "the visiting staff" and the "associate staff."

It was regularly moved and seconded that this clause be adopted as read.

Clause 2. That membership upon the staff be restricted to physicians and surgeons who are: (a) competent in their respective fields; and (b) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees under any guise whatever be prohibited.

Considerable discussion took place on this as to who was to judge whether the person is competent or not in their respective

fields, and as to how it would work in the case of appointment of a new man to the hospital staff. It was finally agreed that everything in this connection was up to the Board of Trustees, and the following suggestions were made as to the best methods to be followed by the Board:—

Firstly—That there should be held regularly each month meetings at which the medical work would be reviewed by the Staff, and such information prepared as was necessary for the Board of Trustees.

Secondly—That a system of Case Records be carefully kept so that all the work and the results of any doctor in the Hospital can be readily known and membership in the Hospital Staff based upon this.

Thirdly—That the Board finally, has to take the responsibility, and the best source for obtaining the evidence is probably the Advisory Medical Committee of the Hospital.

Clause 2 was adopted.

Clause 3. That the staff initiate and, with the approval of the governing board of the Hospital, adopt rules, regulations and policies governing the professional work of the Hospital: that these rules, regulations and policies specifically provide:

(a) That staff meetings be held at least one each month. (In large hospitals the departments may choose to meet separately.)

(b) That the staff review and analyze at regular intervals the clinical experience of the staff in the various departments of the hospital, such as medicine, surgery and obstetrics: the clinical records of patients, free and pay, to be the basis for such review and analyses.

In connection with this clause it was impressed that the staff as defined above has no executive powers, and any rules they make or suggest must be submitted to the Board, this body being the final authority. The Board of Directors have the responsibility of judging who is competent and incompetent, but such information can be obtained from a Medical Advisory Staff. It was stated that the most satisfactory method appeared to be the one recognized medical head in the hospital

subject to the Board, and the need of co-operation between the hospital staff of physicians and the Board of Management was greatly emphasized.

Clause 3 was adopted as read.

Clause 4. That accurate and complete case records be written for all patients and filed in an accessible manner in the Hospital, a complete case record being one, except in an emergency, which includes the personal history; the physical examination, with clinical, pathological and X-Ray findings when indicated; the working diagnosis; the treatment, medical and surgical; the medical progress; the condition on discharge with final diagnosis; and, in case of death, the autopsy findings when available.

It was pointed out the growing necessity for keeping full and careful medical records of cases admitted. The Vancouver General Hospital has evidently a very elaborate and ideal system of keeping records of patients. In hospitals where there are internes they could be responsible for these records, but in the smaller hospitals the Boards are obligated to the extent of providing additional clerks, including those who are capable of taking dictation from doctors, as to findings in operations, etc. In the Vancouver General Hospital such clerks are employed in the operating room and in the record office, and it was estimated that the cost was two cents per day per patient in that institution for records alone. Such records are, of course, strictly confidential and no outsider can have access to them without the written sanction of either the patient concerned or the doctor.

Clause 4 was adopted as read.

Clause 5 was adopted as read.

Clause 5. That clinical laboratory facilities be available for the study, diagnoses and treatment of patients; these facilities to include at least chemical, bacteriological, serological, histological, radiographic and fluoroscopic service in charge of trained technicians.

General discussion then followed, and from consideration of the various clauses it was found that there were very few hos-

pitals that could not comply with such a standard. All hospitals, for instance, should have records. Dr. Seymour, Chairman, contended that every hospital should have an X-Ray and laboratory to do the routine work at least, otherwise they were not hospitals but mere rooming houses. The more difficult laboratory work, as pathology, could be sent to the district or divisional laboratories, especially in the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia, where they have provincial or university laboratories to look after this work. The entire consensus of opinion at the conclusion of the discussion was that the minimum standard was very practical and should be accepted by all hospitals. The Chairman even considered that such hospitals as those carrying the minimum capacity of twelve beds in his province, should comply with all the conditions laid down, but Dr. MacEachern explained that it was not the intention to deal with the hospitals of less than fifty beds at present with regard to the minimum standard, but if it could be accomplished in any such institution, that it was a more ideal condition.

A motion was then moved, seconded and carried, that the minimum standard as a whole be adopted.

The afternoon session came to a close with two resolutions, as follows:—

Resolution No. 1 was presented by Dr. George Stephens, of Winnipeg, and seconded by Dr. A. E. Archer, of Lamont.

RESOLVED THAT this Conference of Western Hospitals of the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia, now in session in the City of Calgary, this 26th day of April, 1920, approve of the Minimum Standard as laid down by the American College of Surgeons, and recommend that it be adopted by the Hospitals and the Hospital Associations of the four Western Provinces.

The resolution was carried unanimously.

Resolution No. 2 was moved by Dr. M. T. MacEachern, of Vancouver, and seconded by Dr. George Stephens, of Winnipeg.

RESOLVED THAT the Conference of Western Hospitals

of the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia, now in session in the City of Calgary, this 26th day of April, 1920, do hereby express our sincerest regret at the untimely death of Hon. A. G. MacKay, Minister of Public Health and Municipalities of the Province of Alberta. We realize that not only the Province of Alberta but the whole of Canada has suffered a great loss; and

BE IT FURTHER RESOLVED THAT a copy of this Resolution be sent to the Premier of Alberta.

The resolution was carried in silence.

The Conference then adjourned till 8.00 p.m.

EVENING SESSION, 8 P.M.

The Chairman called the meeting to order and announced that Miss De Sachet, Supervisor of Records in the Holy Cross Hospital, Calgary, consented to give a paper on the record system in the Holy Cross Hospital.

In this paper Miss De Sachet set forth very clearly the method employed in the Holy Cross Hospital of Calgary. As previously pointed out, this hospital has adopted a system of record-keeping which is very complete without being too elaborate. The nurse in charge of the records attends to this matter exclusively. The records consist of the following:—

1. A summary card, giving full particulars of the patient, disease, etc.

2. A certificate, signed by the patient relieving the Hospital from responsibility but at the same time assuring the patient that the Hospital authorities will do everything in their power to render efficient service.

3. The Case Record.

4. The progress notes.

5. Operation record.

As the reader of the paper pointed out, those in authority in a well-organized institution cannot fail to recognize the value of a good system of record-keeping for the protection of the



Snapshot of Hospital in Switzerland.



Sterilizers in Wall Adjoining Operating Room.

patient as well as the hospital. The method devised in the Holy Cross Hospital enables the record-keeping to be done by one person, and this, it was stated, could be taken care of in any hospital accommodating from one hundred and fifty to two hundred patients daily. At the Holy Cross Hospital on admission each patient is given a number, which number, by a clever combination of letters and numerals, denotes the date of admission, and this number is the patient's distinction on all of the records kept. Within forty-eight hours the doctor in charge of the case is required to fill in the personal and family history of the patient, and in seven days he has to give the final diagnosis. On discharge the final diagnosis is given with complications, etc., and the condition of the patient on discharge. On the completion of all the papers relative to the case, they are filed in a systematic cross index which gives all the information desired about the patient for future reference. This system gives accessible information on:—

First—The work of different attending doctors during the month.

Second—The different diseases with results.

Third—The different operations with results.

Fourth—Complications.

Fifth—Infections.

Sixth—Deaths and causes.

Seventh—Summary of work.

The system certainly appealed as being suitable for hospitals and the real secret of it would appear to be a competent person who watches closely this phase of hospital life and sees that all information is obtained from the physician and duly recorded.

Records must be produced on all cases before operation, unless in emergency, and these must be written up within forty-eight hours. Daily rounds are made by Miss De Sachet to see that all the records are attended to, and being a nurse she checks over the nurses' clinical charts and notes. The attending doctors at the hospital write all the histories, and there

is a monthly review of the work with the staff, at which meeting a summary of the work and results is produced.

Considerable discussion followed this paper, and Miss De Sachet was highly complimented by several of the speakers.

The Chairman now called on Dr. M. T. McEachern, of Vancouver, to give an address on "The Practical Application of Hospital Standardization in an 'Open' Hospital." All points in this address were clearly illustrated by a large series of slides. The address was as follows:—

"You may readily agree with me when I tell you there are many difficulties to overcome in an 'open' hospital, particularly in connection with our standardization programme, but these difficulties are surmountable whether the hospital is 'open' or 'closed.' All hospitals have similar functions to perform, namely: Curative, preventive, scientific, educational, teaching and training. We must always keep these functions in mind when administrating our institutions. To-day in the hospital which I represent we find many difficulties to overcome, owing to natural circumstances or prevailing conditions, namely:—

1. Magnitude of the Institution.
2. Wide range of clinical material.
3. Rapid growth of the Hospital.
4. The increased cost.

"So many of our hospitals to-day are financially embarrassed, and indeed you can get money for everything else readily but for the sick and for hospitals. People of this great country of ours must be educated up to the fact that the hospital is the greatest economic asset in the community, apart from it being a sacred service to humanity. Let the day soon come when commercialism, materialism, indifference, apathy and everything else detrimental to our splendid institutions, is replaced in the minds of our people with the consciousness of the sacred duty and privilege to help these institutions financially so as to do the very best by those whom they are treating. If our institutions paid a dividend in 'cold cash' instead of a dividend in health restored human beings, how much more popular they

would be. During the greatest world war ever seen, our war hospitals everywhere were to the last detail efficient. That was fine and the service was wonderful—but why not in peace time?

"Our hospitals to-day must become efficient. They should give the patients all the facilities necessary for a good diagnosis, for competent care and treatment throughout. They should restore the patient to health as quickly as possible. They should restore the working man to earning capacity in as short a time as it can be accomplished. To do this the motto must be *One hundred per cent. efficiency care for our patients.* How many hospitals can measure up to this?

"Our institutions must have internal organization, especially if they are any size. This has to do chiefly with the paid staff, which should be organized on a clear and comprehensive basis with proper division of authority and responsibility, guarding against overlapping or omission and securing the best co-operation between departments. I believe in having one head only to the hospital, and the work divided into three natural phases: Medical, Nursing, Business, each having competent executive heads, and these three divided further into departments, as the case may be; each department finally having a competent head or supervisor who in turn is responsible for their executive head and through them to the chief executive officer, who stands between the internal organization and the higher governing Boards. This means efficiency and the proper division of authority. Added to this I would recommend meetings of heads of departments once or twice a month to discuss the various interrelations of departments and matters pertaining to the good of the hospital.

"The attending staff of the hospital should be selected by the Board of Directors or Trustees on a sound basis. In our case the Medical Association of Vancouver sends up several nominations and from these the Board of Directors selects a staff. It does not always follow that the one who heads the list gets the position. There are two very important qualifications, which are as follows:—

(a) The senior staff must either be specialists in the depart-

ment to which they are appointed, or that branch of medicine must be the predominant part of their practice;

(b) That both senior and associate members of the staff must have some qualification which marks efficiency in that department, either:

1. An additional academic degree in that branch, or

2. A record of efficient work checked up by records of cases with diagnosis and end results, made at the instance of Directors from their work in the hospital.

"Formerly the Boards of Trustees selected with little or no information, but now all this is carefully compiled and each man's record more or less accurately ascertained. The staff embraces all the services, including Medical, Surgical, Obstetrical, Gynecological, Eye, Ear, Nose and Throat, Genito-Urinary, Pediatrics, Chest Diseases, Dermatology, Orthopedics, Neurology, Metabolism, Anesthetics, X-Ray, Laboratories, Physiotherapy, etc. They hold position for five years. They are divided into senior and associate, and make their own mutual arrangements about carrying on the work, usually taking a month's service at a time. The working of the staff is divided into two branches:—

First—Administrative.

Second—Clinical.

"In the administrative phase the staff is divided into several working committees, one for each of the various departments which bring in reports monthly pertaining to the betterment and efficiency of that department.

"Clinically, the staff discusses and reviews the work of the hospital and sometimes a great deal is done in small working committees specially appointed. The most of this is carried out through our Medical Records Department and through a regularly organized medical investigation system. The staff of the hospital must be at all times alert to everything that tends to the betterment of the institution and the elimination of all things that do not tend to the best working for all concerned.

"The hospital must have laboratories and facilities with which to make a diagnosis, and these laboratories consisting of

such as can do the usual tests, including Bacteriology, Pathology, Serology, etc. It may not be possible to do this in all our institutions, but every institution must be equipped to do the necessary routine work, and have an X-Ray. For the more complicated work, as Pathology, provision can be made in the district, provincial or university laboratories to carry this on. Any facilities, therefore, that are helpful in making a more accurate scientific diagnosis must be provided, either in the institution or be available somewhere else. The laboratory systems everywhere are now being brought to such a state of perfection that there is no reason why every institution should not have a proper service.

"Possibly the greatest difficulty in all our hospitals to-day is the getting of good records. There are just a few points I want to make about this subject:—

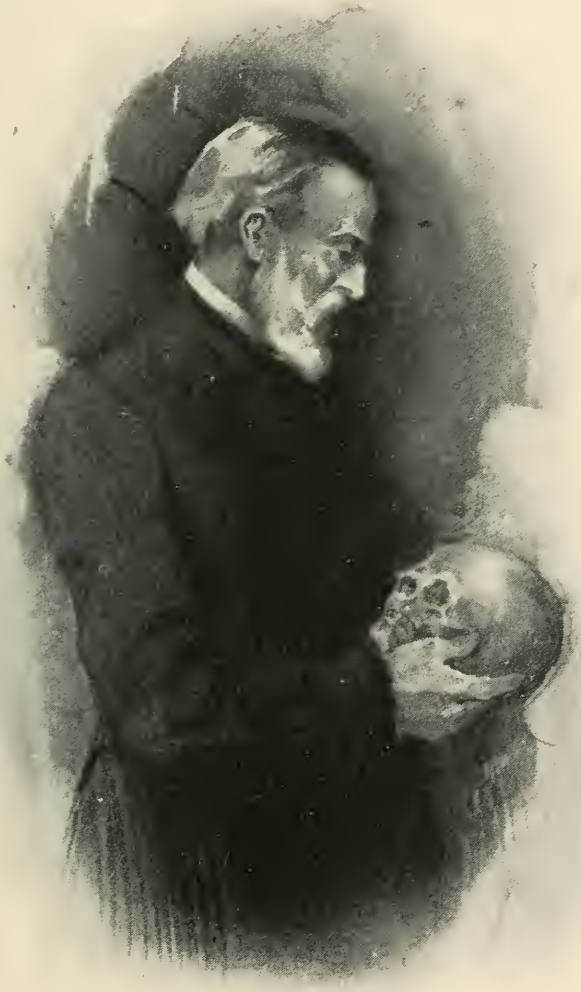
First—Medical Case Records on every patient in every institution that goes by the name of "hospital" are absolutely necessary.

"You would not expect to run any business or commercial concern without records. How much more, therefore, is it necessary to have these in institutions dealing with life and death every minute in the day.

Second—Medical Case Records are possible in every hospital, inasmuch as these records can and should be compiled by any doctor.

"There was an idea that medical students were the only ones who could and should write up medical case records. That day has gone and now the practitioner in every institution must feel his obligation to make out proper records for his patients, which records shall be the property of the hospital. In our institution we demand records, and fortunately, have a number of internes who write all the public and semi-public Case Records. In the private and semi-private cases this is not always possible, but we ask the doctors attending to do so, giving them three choices.

1. Write it themselves.
2. Dictate it to a stenographer, which we supply; or
3. Leave an order for an interne to write it.



A Study of the Human Skull.

"We demand a written report in the Operating Room of all our operations, "What was done" and "What was found." This is further checked up by the Laboratory and their report put on the same page, on the opposite side. All diagnosis should be posted before operation. All cases should be written up before the operation starts, excepting in cases of emergency.

Third—Medical Case Records are private and should only be produced to the doctor in charge of the case, the patient himself or herself, or on an order of either one or a court.

"This being laid down as a rule, will help to get many records from patients if it was felt by them that there might be some danger of the report not having the necessary privacy.

"The Hospital must, if possible, meet the attending doctors part way in the getting of good records. It may be that they will have to add a Medical Clerk stenographer, but at any rate, they can afford convenient forms and keep them in a convenient place. We recommend a semi-stereotyped and semi-diagramatic form, similar to this, that I am showing you on the screen.

Fourth—All Medical Case Records should be very carefully scrutinized and summaries produced at the end of each month showing the actual results of the work, much the same as this form I am passing around, which shows the results obtained during the month and checks up incompetent work, infections, etc. Boards of Directors or Trustees should demand that in each and every case proper records be compiled, for after all Boards of Directors or Trustees are responsible for the institutions and for the money spent therein; therefore it is only their duty and privilege to make sure that this money is well spent and the patients getting good and efficient care.

"In connection with Medical Case Records, I could mention a great many practical uses of same. Let us look into a few.

Firstly—In checking up the work of the Institution as to whether it is good or bad.

Secondly—In the assistance which it gives when working out a case which has been in previously or, as we call them, in the "return" cases, where the subsequent history has a good deal of bearing on the past. To illustrate this: A patient entered a

far Eastern hospital some time ago with some obscure abdominal condition. This condition baffled her surgeon, as she had had a former operation, but unfortunately did not know much about it. A wire transmitted to Vancouver to our Medical Records Department revealed her past history, and this information was secured in less than fifteen minutes. The whole transaction transpired over the wire in very short order and the information thus received at the other end was of great value in diagnosing the case. If that patient had come into this Institution her past history would have been available for her present illness.

Thirdly—These Medical Case Records are invaluable for scientific purposes and the advancement of medical knowledge. We all know that all medical knowledge, data and scientific advances have been based on actual cases, and these histories are only obtainable through a good record.

Fourthly—The value of Medical Case Records from a Medico-legal aspect. There is not an hospital on the face of the earth that I know of that will not, some day, be threatened with or face a lawsuit against them. How comforting to turn up to an actual Medical Case Record, which is recognized in the court, and find on this Record all the true data of the case. Any money spent on such a Record system will be amply repaid even from this point alone.

Fifthly—Through a properly regulated and organized Record system reports of the work of the various attending doctors can be readily secured, which will not only tell the quality but also the quantity of surgical work being done in the Institution. On this report the Board can base their opinion when selecting members to fill vacancies on their Staff.

Sixthly—The Medical Case Record is of great value to all Public Health officials in ascertaining many points which will guide them in their combat against conditions which are detrimental to health. The seasonal incidence of disease and comparative statistical data is always readily available from the local hospital when such is required.

Seventhly—Staff review of clinical work of the Hospital.

Through the Medical Records Department, good clerks and records, review data can be secured on any disease. For instance, —during the month of May in our hospital, we will consider the question of Appendicitis, especially from the surgical side. Last month we considered the question of influenza, and the month previous we reviewed all the Hernias of the previous year, showing cases which had complications and with an explanation why. This review of the work of the hospital by the medical staff is of great value, not only to the hospital, but to the men themselves.

"We must not, therefore, look upon Medical Case Records as either being impossible or being a luxury. They are as essential for the institution as the food we eat is for the body. A great deal more could be said about these Records but time does not permit and the lantern slides will demonstrate to you the system complete as being used in the Vancouver General Hospital.

"In conclusion, let me say that hospital work has now become an intensive specialty and you can quite see the importance of it being such. After all the hospital is nothing more than the work laboratory of the doctor and the nurse, the patient is the product. We judge our success or failings on the product. We know what we require to have a good product and therefore it should behoove us all to live up to it as conscientiously as we can."

Considerable discussion followed and questions asked pertaining to the system outlined.

Meeting adjourned at 10.30 p.m.

Tuesday, April 27th, 1920—10.30 a.m.

Meeting called to order by the Chairman.

The Chairman tendered an invitation from the Calgary Medical Society for luncheon at the Palliser Hotel at 12.30 to all the delegates present. This invitation was presented through Dr. McGill, President of the Calgary Medical Society.

Dr. M. T. MacEachern read several resolutions which were

referred to the Resolution Committee to report on during the afternoon session.

Dr. R. E. McKechnie arose at this point to use the privilege of asking that the Secretary request the morning paper to correct a statement regarding his remarks about fee-splitting. The paper suggesting he was in favor of certain forms of "fee-splitting" but he wanted it distinctly understood that he was opposed to "fee-splitting" in any form whatsoever.

The Chairman now announced that the question of Hospital Financing was open for discussion by the meeting, and Dr. M. T. MacEachern, being asked to lead, suggested that we confine our remarks particularly to charges and costs made by the different hospitals in the West. Several hospitals therefore reported and it was found that the average prices per day pertained.

Charges.

Private wards ranged from $3.50 to $8.00 per day, and the average seemed to be $4.50 to $5 per day.

Semi-private wards ranged from $2.00 to $3.50 per day, the average being $3.00 per day.

Public wards ranged from $1.50 to $3.00 per day, and the average was $2.00 per day.

Per Capita or Per Diem Cost.

At the outset it was explained that the per capita per diem cost was a very relative term and really to get at an accurate basis a knowledge of the service rendered was necessary before a comparison could be made. However, it was found that in the Western hospitals the per capitas ranged between $2.78 and $4.50 per patient per day, and that the average per capita under the present conditions was $3.50 per day.

Municipal and Government Aid.

In considering the financial support received from the various municipalities and Governments in the four Provinces, it was found that there was a great variance in arrangements, and no average could be ascertained.

Purchasing of Supplies.

Interesting discussion followed re purchasing supplies by tender and in the open market. The question of a Purchasing Agent and Bureau for the Four Western Provinces aroused great interest. Dr. Mackid, of Calgary, pointed out several advantages showing where:

First—Large sums of money could be saved by such an arrangement, and

Second—That more standard and efficient articles could be secured.

This bureau at all times would serve as a source of information to all the hospitals. Dr. Seymour outlined the Bureau now in the Province of Saskatchewan, which is used by the hospitals there, and suggested a similar arrangement should be made for the four provinces. A resolution favoring the adoption of this idea was submitted to the conference by Dr. Archer, of Lamont, at the afternoon session.

The Chairman now called on Dr. O. R. Avison, of Seoul, Korea, who gave a very interesting discourse on Medical work in Korea. He reviewed his early medical experiences and the evolution of medical science in this country. Dr. Avison, who, twenty-seven years ago, left Toronto for Korea to look after medical science amongst the Koreans, told the delegates of his early struggles and disappointments, with the ultimate success which he obtained. He intended to start constructive work instead of practice and to his dismay discovered that the Koreans possessed no medical or scientific language. His first great work was the translation of Gray's Anatomy into Korean, and fifteen years later had the satisfaction of seeing seven Koreans graduate in Medicine, whom he instructed. At the present time, directly as the result of his work in medicine amongst them, one hundred Koreans are successfully practising medicine in Manchuria, Siberia, China and Korea, while thirty small hospitals are in operation. Dr. Avison is in Canada endeavoring to interest a number of doctors and nurses to go to Korea to man the hospitals.



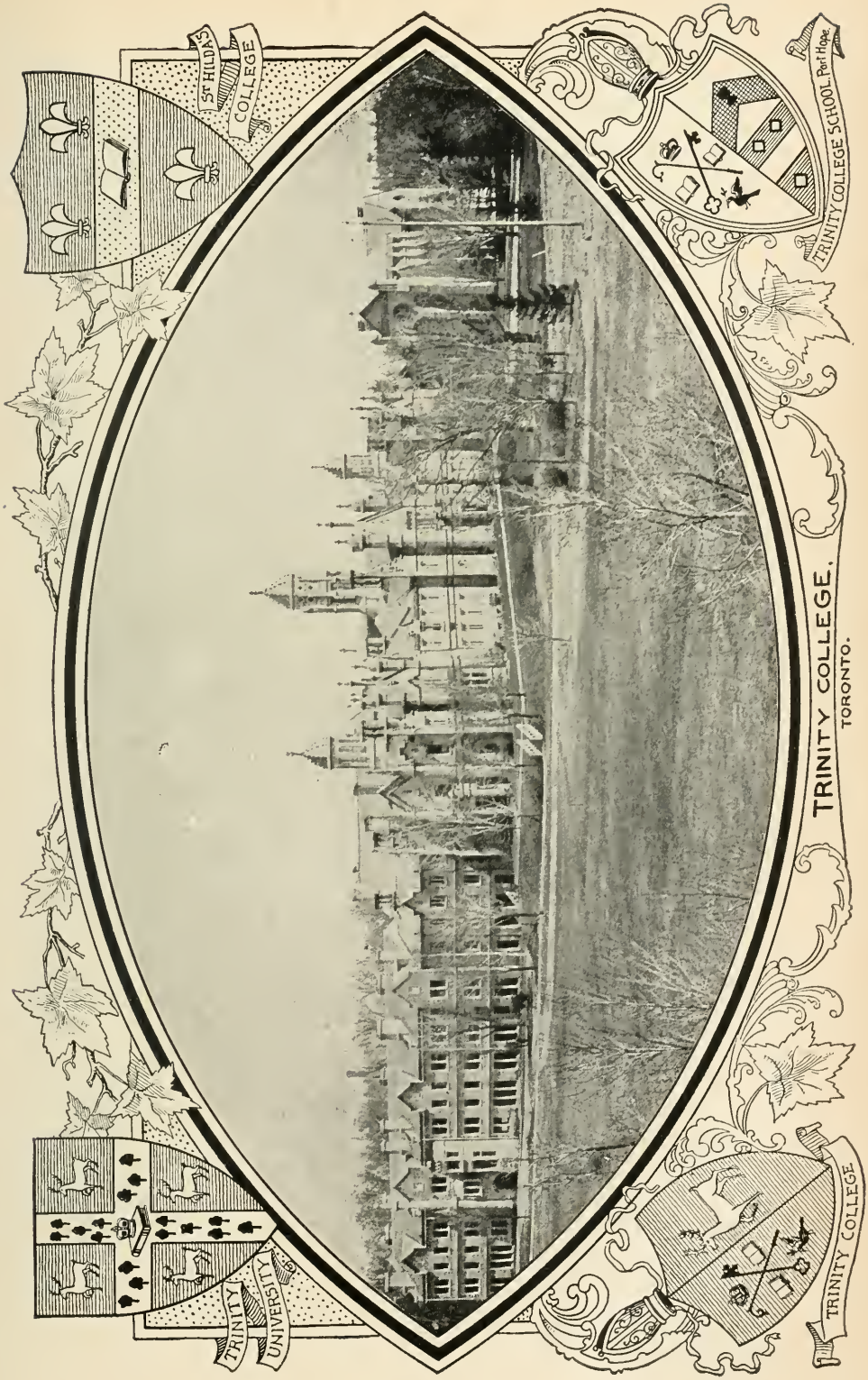
The Bartlett Light—Ideal for the Operating Room.

Dr. M. T. MacEachern suggested that we now discuss the nursing problems in our hospitals, in view of the fact that Miss Edy of the Calgary General Hospital was present, and fearing that she might not be here at the afternoon session. Dr. MacEachern made further remarks on the question, bringing up the problems of the present day. He said: "The greatest difficulty we have to deal with to-day is the shortage of applicants for our Training Schools. I believe that this shortage is not altogether an actual shortage, but a relative one. The scope of service of the undergraduate and the graduate together with the exacting demands of the institutions and the medical profession have greatly increased the work of the nurse, and as a result we need a larger number than we had formerly. Again, the public of to-day demand a service which is out of all proportion to that of former days; in fact the service demanded by the public has almost increased in a parallel way with the high cost of living. However, there are several reasons why there may be an actual or apparent shortage of applicants:

Firstly—The scope of work for the undergraduate in any hospital and for the graduate in the hospital and outside the hospital, has gradually broadened in the last few years, together with the demand put upon them in their service. Hospitals to-day are fast developing special departments and using nurses. For instance—there are a large number used as technicians, as admitting officers, Social Service, etc. In a large number of hospitals to-day nurses are even giving anesthetics. Indeed, the last few years have brought a tremendous expansion in all fields, whether it be nursing, school nursing, infant welfare, tuberculosis, mental hygiene, industrial nursing, etc. Now I hear they are putting nurses on the Trans-Atlantic and Pacific steamers; consequently the demand has been a little more than the supply.

Secondly—There is too much of a tendency to commercialize this profession instead of keeping it more in line with the idealism of the Florence Nightingale spirit.

Thirdly—There is an outside influence at work to lower the standing of qualifications and of efficiency; indeed I am quite correct in saying that some of our medical profession consider


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that any old woman is good enough to nurse to-day, and fail to realize that the nurse is their ever-constant "third eye" on the patient during the whole twenty-four hours, whereas their observations are more or less casual.

Fourthly—The nurse-in-training has been more or less exploited by our hospitals for the menial work, which could be done by maids or others, and thus allow the nurse to devote herself to the real nursing care of the patient.

Fifthly—The hours are too long, as we are unable yet to give them all an eight-hour day.

Sixthly—The lives of nurses-in-training should be made more attractive and the course of instruction which is given.

Finally, the Training School must not be regarded as a convenience or side issue of the institution, but one of the high ideals of the institution. I would recommend the putting on of an educational campaign to enlist more applicants for our Training schools. We lose a large number of good applicants who are graduates from high school but are too young to commence training. Where possible, we should link our Training schools up to the higher educational institutions in each province, or I mean the University. In British Columbia we have recognized this latter point and in our University have a Department of Nursing where the girl who completes her high school and passes her matriculation, secures two years' academic education in the University, and this, combined with the two years actual nursing service in the hospital, with a fifth year for specialization in Public Health Administration and Teaching, gives her the University degree and qualifies her for more or less of a leader in her profession in one or other of these lines, as well as a good, sound, practical nurse. In this way we fill a great need in our Province without having to import from other countries."

Miss Edy, Superintendent of Nurses of the Calgary General Hospital Training School, read a paper on the nursing shortage throughout Canada, and attributed it, among other things, to the lure of the American hospitals to Canadian girls. The American hospitals, it was shown, offered a number of extra inducements for Canadian girls, stating that wherever possible a

preference was shown them. The large departmental stores, industrial houses in Canada, and other inducements, had attributed towards depleting the nursing fields, owing to the better working hours offered and the improved working conditions. She concurred heartily in the remarks of the previous speaker, and felt that there were a number of ways of getting at this question.

Discussion arose from many present, chiefly centering around the question as to whether a nursing probationer labor for love or for pay. It was shown that probationers were paid, in the majority of Western hospitals, $8.00, $10.00 and $12.00 monthly, though some hospitals, such as the Royal Alexandra in Edmonton, paid as high as $25.00 per month. There seemed to be a wide divergence among the amounts paid to nurses-in-training, and it was stated by some speakers that in several large hospitals in the East no remuneration was given, and indeed, in one hospital, a charge was made for the privilege of being allowed to train. There were many adherences to the old-time principle—that probationers should still continue to offer their services with little or no consideration as to monetary remuneration. Dr. M. T. MacEachern, of Vancouver, and Dr. L. S. Mackid, of Calgary, were both strongly of one mind—that the attractiveness of increased salaries for nurses-in-training would have a tendency to make this profession more materialistic disrupting discipline and efficiency, and that young women who volunteer to follow this calling should do so from a higher motive than that of the amount of remuneration to be received. Dr. R. O. Rothwell, of Regina, spoke strongly against this contention, and was in favor of paying probationers a living wage considering the high cost of living now-a-days. In this he had the support of a number of prominent Western hospital authorities. Mayor Hardie, of Lethbridge, and Chairman of the Galt Hospital Board, who had taken an active interest in the proceedings throughout, was of the opinion that the present scale paid probationers was entirely inadequate. He said in part: "The spirit of idealism is rapidly passing out, to the betterment of the country, and a more materialistic age has taken its place." He was of the firm opinion that there should be an increase in

the monthly allowance given nurses-in-training. Alderman McTaggart, of the City of Calgary, expressed his views stating that the securing of better type of girls to enter the training service in hospitals would soon be accomplished by paying what he characterized as a "decent salary." He stated that a Nurses' Home was necessary for Calgary, and asked the opinion of the delegates as to the advisability of allowing the nurses to reside at home as the eight-hour law was in effect. The answer to this question was that it would disrupt the discipline very quickly, as had been proven in previous instances.

It was desirous on the part of delegates to arrive at some uniform standard scale of pay for nurses-in-training, but it was readily seen that there was such a diversity of opinion, which was very strong on both sides, that it would be impossible to bring in a resolution to cover this point, and the discussion thereon terminated till the afternoon session.

Dr. G. E. Stanley, M.L.A., was of the opinion that the election of Hospital Boards by the people was the sanest way. He emphasized the need of a universal interest in hospital work and advised against the narrowing down of the personnel of any Hospital Board. Municipal hospitals fill a long felt need but municipal management was not always the best form.

Dr. McGill, President of the Medical Society of Calgary, announced the luncheon to be given in the ballroom of the Palliser Hotel in honor of the delegates by the Calgary Medical Society.

Meeting Adjourned.

Luncheon with the Calgary Medical Society in the ballroom of the Palliser Hotel. Dr. M. M. Seymour, Chairman of the Conference, at the close of the luncheon extended to the members of the Calgary Medical Society a very hearty vote of thanks for their kindness and consideration to the delegates at this particular time.

COMMERCIAL DEPARTMENT

EXPLAIN THE WAY AS WELL AS THE WHEREFORE

No doubt many of our failures are due to our neglect to impress the patient with the importance of the matter, or to explain clearly enough the method of procedure. For instance, when we order the patient to take vaginal douches if we do not at the same time order a proper syringe and explain its use the chances are that the result will be failure to get any good effect—if not indeed to excite disgust for the whole matter. A vaginal douche may be a great comfort to the patient as well as a valuable curative measure—as it may also be a dismal failure or worse. When we say order a *proper* syringe we mean of course the Marvel for there is no other syringe nearly so well adapted to this purpose. The Societe d'Hygiene de France, in 1902, awarded it the Gold Medal as the best syringe to cleanse the vagina.

A TIMELY HINT

Hatcher and Wilbert, in their *Pharmacology of Useful Drugs,* have aptly and scientifically told the reason of the proper cleansing of the bowel. They say: "Neutral fats and saponifiable oils, like butter and olive oil, practically pass through the stomach, but are saponified more or less completely in the small intestines, and the resultant soaps may be sufficiently irritating to the intestinal mucous membrane to cause increased peristalsis and, with an excess of fat or oil, act as a mild laxative."

Common castor oil contains free fatty acids and consists largely of ricinolin, which yields a soap that is irritating in its action, this being usually limited wholly, or mainly, to the small intestines, because these soaps are absorbed into the circulation without reaching the colon. The increased peristalsis in the small intestines rapidly drives a large amount of fluid into the colon, distending it and causing an evacuation before the stools become fully formed, or at least while they are soft, because a sufficient interval of time is not afforded for as much fluid to be absorbed as usual.

To quote further from Hatcher and Wilbert: "Pure castor oil acts mildly, even in fairly large doses, because the ricinoleic acid is liberated slowly, and, the more active the peristalsis, the less is the time allowed for further liberation of the acid; hence, to a certain extent, its action is self-limiting.

"Castor oil is frequently used for children, being a dependable laxative or purgative, which may be administered without fear of causing intestinal inflammation or disturbing the stomach seriously, but it is not suited for continued use in chronic constipation because of its gradually lessening effect.

"The taste is disagreeable, and children manifest an especial repugnance to it, so that it is best administered in such a way that the taste is masked."

Laxol is a pure castor oil that meets each of these requirements. Being sweet as honey, it is liked by children, and, while bland, it is thorough in its action, so that no better cleanser can be found for the diseases of the summer time depending upon irritation and fermentation of the intestinal tract.

LOCAL ANESTHESIA

Dr. Torleif Torland, of Seattle, Wash., in a recent article entitled "Local Anesthesia," wrote as follows:

"As already stated, I believe novocain is preferable in every case, as it produces an intensive anesthesia without toxic symptoms, and when combined with adrenalin the effect will last several hours. As to concentration, the rule is that, for anesthesia of skin by subcutaneous injections, ¼ to ½ per cent. is sufficient. For indirect regional anesthesia 1 per cent.; and, where we want to reach larger nerve trunks as the radial and median, 2 per cent. To the full amount of solution of novocain which we wish to use during one operation, is added 8-15, highest 20 drops of adrenalin (suprarenin) solution 1-1000. Without hesitation, as high as 50-100 cc. of 1 per cent. and 150-250 cc. of ½ per cent., can be injected in one sitting, if so much is needed. Elastic compression above the place to be injected is of great aid in prolonging the time of the anesthesia.

For office use it is practical for those using local anesthesia to a great extent to have a standard solution, usually 2 per cent., from which the weaker concentrations can be prepared. In order to keep the solution sterile mercury corros. can be added to make 1-10,000. Adrenalin is added to the solution just before use. For those who only use local anesthesia once in a while, tablets of novocain and adrenalin are to be preferred.

TOBACCO'S EFFECT TESTED

A LONDON doctor recently stated in an address in that city that he had at one time advised his students not to use tobacco, believing it weakened digestion. Actual tests, however, had shown that the saliva of a smoker digested starch better than that of a non-smoker. Starch being a constituent of many foods, the pipe-smoker may not only enjoy his pipe in comfort; but also has the satisfaction of knowing that his digestion is being helped. Pipe-smoking aids digestion.

CAUSE AND CURE

FECAL infections as the underlying cause of arthritis and neuritis have been engaging the attention of the medical profession for the past few years.

One of the commonest of such infections is a cholecystitis with or without the formation of stones and often attended by infection of the ducts. Surgery is frequently indicated in such conditions, but a large proportion of patients are relieved or cured by proper diet and elimination.

Pluto Water is most efficient in the medical treatment of these cases. By quickly freeing the bowels from accumulated toxins, and so preventing their absorption into the portal circulation, the hepatic cells are able to resume their normal function, and the bile is rendered less viscid, thus materially assisting in reducing inflammation in the gall passages.

The French Lick Springs Hotel Co., will gladly furnish sample of Pluto Water, together with diet lists suited to these conditions, on request; charges prepaid.

AN IDEAL RESORT FOR CONVALESCENT PATIENTS

Physicians have frequent opportunities of referring those convalescing from illness to a resort where they can quickly recover their old-time vigor and enjoy an almost ideal climate, 2,500 feet above sea level. Such a resort is Virginia Hot Springs, just one night out of New York. The management have spent a huge sum of money on this choice spot in "Old Virginny," and are anxious that the Canadian medical profession should continue to refer cases there, as they have done in years gone by. The Homestead Hotel is one of the handsomest houses in America. It is built of solid brick, containing 500 guest rooms, with many parlor suites and 300 private baths. It is spacious, dignified, quiet and restful, with magnificent mountain views on every side. It is no exaggeration to say that Hot Springs means the Homestead Hotel. The Company owns 5,000 acres surrounding the hotel, so that physicians can understand that their patients have every opportunity of enjoying outdoor life and regaining thereby their normal strength.

The dominant factor making Hot Springs world-famous is the cure in which the climate as well as the water assist. The waters are conducted by gravity to the bathhouse and distributed fresh from the ground to the bathing apartments on different floors without loss of heat or its increase by artificial means, and fully charged with all their gases and other health-giving qualities. At none of the celebrated places in Europe, and at no other springs in America, is the temperature prescribed for hot baths that at which the water actually emerges from the earth in the natural springs.

The springs are beneficial, not only for bathing, but for drinking. Besides the hot springs, the effects of which as drinking waters are pronounced, there are magnesia, sulphur, and soda springs within the grounds, and alum water from a spring not far distant. The water from the soda spring comes strong and clear from the ground at a uniform temperature of 74 degrees. Physicians should address for full information Christian S. Andersen, Esq.

The Canadian Journal of Medicine and Surgery

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Editorial

CHARLES W. SERVICE

CHARLES W. SERVICE, M.D., C.M., Trinity, after two years' furlough, returned in mid-September to West China, where he worked very hard, early and late, for seventeen years. During the last year he has visited many places in Ontario and in the Western Provinces in behalf of a medical school in Chengtu, in connection with the West China Union University. There has been associated with Dr. Service a central committee in Toronto, and a few scattered workers in other places. Their aim has been to raise money with which to build and equip two medical buildings wherein the young Chinese students at the Union University may receive instruction in the final branches of medicine. The science departments of the university already teach physics, chemistry and biology, in buildings already provided.

Of the $100,000, which it is hoped will be raised during the next two or three years, ten thousand has already been paid in and another ten has been subscribed. One of the gratifying features of the quiet campaign which has been and is in progress, is the cheerful way in which doctors, dentists and nurses have contributed to this most worthy cause. One M.D. subscribed $1,000; several others $100 apiece; and we are informed that in order to pay these amounts it will mean a real sacrifice to some of them. The nurses of Toronto came up magnificently with $3,000—a noble offering.

Service is off for seven years more, leaving his wife and young family in Toronto, where the children will be educated. A handful of his committee met him the evening prior to his departure and presented him with a purse of $230.

Dr. Service and his fellow-workers have given wide publicity to this proposed medical college so very urgently needed, and now that he has gone it is felt that the movement must go on and the balance of $80,000 raised. A further appeal is being made to the doctors, dentists, nurses, and their friends, to contribute this amount. THE CANADIAN JOURNAL OF MEDICINE AND SURGERY is only too pleased to endorse this movement, and trusts the money will be forthcoming promptly.

As many enquiries have been made as to the amount expected from subscribers to the Chengtu Medico-Dental College enterprise, the following tabulation will enable each to decide, and will also

show how readily the sum needed can be raised if there is a general response:

5	subscribers	giving	$1,000	each =	$5,000
10	"	"	500	" =	5,000
20	"	"	300	" =	6,000
30	"	"	200	" =	6,000
50	"	"	100	" =	5,000
100	"	"	50	" =	5,000
500	"	"	25	" =	12,500
1,000	"	"	20	" =	20,000
1,500	"	"	15	" =	22,500
2,000	"	"	10	" =	20,000
3,000	"	"	5	" =	15,000

Subscriptions may be sent to Dr. John N. E. Brown, 238 Bloor St. West, Toronto, General Secretary, or to the Treasurer, Walter E. Willmott, D.D.S., 74 Crescent Road, Toronto.

VITAMINES

THE practical suggestions made by Colonel R. McCarrison at the last annual meeting of the Research Defence Society ought to receive wide publicity and much emphasis. He pointed out that the A-vitamine is found on green leaves and growing parts of plants and is stored in the fats of the body. It thus is found in milk. It is not found in many of the proprietary foods so much used in infant feeding. B-vitamines are found in the germs of seeds, the cells of yeast, and in egg-yolk, being stored in the germ in order

doubtless to stimulate the growth of the embryo. Deficiency of A-vitamine is in some way related to the production of rickets and xerophthalmia. Deficiency of B-vitamine leads to disordered function of every cell in the body. The C-vitamine is antiscorbutic, present in all vegetable foods. It is frequently destroyed or reduced in efficiency by boiling vegetables. May not pyorrhea be an incipient scurvy and in part caused by a lack of C-vitamine? Vitamines are abundant in natural foods, but are destroyed or dangerously reduced in amounts in manufacture, purification and sophistication of foods. Milk should not be over-pasteurized.

McCarrison has found that in monkeys fed on food deficient in vitamines there was a cessation of growth and repair, living cells were not replaced, loss of weight; the heat of the body was not maintained; the respiratory function flagged; energy needed for motion was lacking; the heart's action became weak and the circulation sluggish; nervous energy was greatly in abeyance, sensation impaired, nervous impulses imperfectly generated and imperfectly controlled by the higher centres. This neuro-muscular control affected also the muscular tissues of the alimentary tract, hence the waste products of the body were imperfectly evacuated. The organs of secretion and excretion, becoming impaired in function—digestion was impaired. The glandular structures of the duodenum, liver, pancreas and intestine underwent degenerative changes—the cells apparently had lost the power or the will to work. Vitamines pro-

vided the cells with this power. In the wake of imperfect production of digestive juices and debility of bowel, pathogenic organisms found opportunity for growth. Diarrhea, dysentery and colitis were constant consequences of these dietary deficiencies. The blood depreciated, producing anemia. It is now understood why twenty-five per cent. of patients at clinics suffer from disorders of the digestive tract and that those subsisting on white bread, margarine and tea are languid and anemic. There is likewise dysfunction of the endocrine organs, so that a vicious circle of disturbance of the metabolic processes is established and maintained.

McCarrison maintains that the functional perfection of each cell in the body is dependent on the provision of a food well-balanced as to fats, proteids, carbohydrates, and salts, with a sufficiency of the three vitamines for the activation of their chemical reactions.

Important as these accessory food substances (vitamines) are, a proper amount of proteids, fats and carbohydrates is also absolutely needed.

So an abundance of natural foods at a reasonable cost, together with a knowledge of the elementary facts of nutrition, should be the aim of everybody. People must be taught what to eat and why they eat it. They must be told that the fresh fruits are of more value to them than alcoholic beverages. They must eat wholemeal bread, oranges, apples, tomatoes, onions, instead of pastries and sweetmeats; told that

a raw egg beaten up in milk is an infinitely better tonic than many much advertised blood purifiers.

" Behold! I have given you of every herb bearing seed which is upon the face of all the earth, and every tree in the which is the fruit of a tree yielding seed; to you it shall be for meat." The farther men depart from this injunction, McCarrison concludes, the more they have purified and sophisticated their foods, and the more they have substituted for foods made in nature's laboratory those of their own invention, the more freely will death stalk unchallenged in their midst, and the greater will be the burden of humanity's woe.

Canadian Journal of Medicine and Surgery

Toronto Canada

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Address all communications to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Reprints, including halftones, etc., supplied authors at Net Cost.

Original Contribution

ADDRESS TO THE GRADUATING CLASS OF THE ROSS MEMORIAL HOSPITAL, LINDSAY

June 1st, 1920.

By J. W. S. McCullough, M.D., D.P.H.

Mr. Chairman, Ladies and Gentlemen: I am honored in having the privilege of addressing the graduates of this hospital, so well equipped and managed in the interests of the public of the flourishing Town of Lindsay. Although I have in my capacity of a public servant nothing to do with the administration of hospitals, the work of curing the ills of mankind carried on in the modern hospital is so closely allied to that of the prevention of disease in which the Board of Health is concerned that the Board has a lively interest in hospital work and particularly in the work of nurses. For the present day nursing is not merely in caring for sick people alone. The field is daily becoming wider and too many nurses cannot be trained. Indeed, the facilities in all the training schools for nurses on this continent are quite insufficient to provide the training for the nurses required, and at no time since the days of modern nursing began has the demand for nurses been anything like as keen as at the present time. Primarily the nurse was for the sick alone and by degrees she became the faithful ally and strong right arm of the physician. Now she is in constant demand as a public health nurse, as a school nurse and as a social worker who follows like a sleuth upon the tracks of disease in order, not merely to cure, but what is of infinitely greater importance, to prevent, disease.

Public health work in Ontario had its beginnings about forty years ago. In its early days the chief function of the health officer was to battle against outbreaks of communicable disease, to clean up unsightly backyards, and to lessen unholy smells. Little by little it was learned that it was of great importance to get at the causes of disease and death, and to endeavor to remove these causes. It was discovered that typhoid fever was caused entirely by the presence of the body excretions in public and private water supplies, in food whence it was carried by flies, and from contact with active or passive cases of the disease. Having learned this, the way of prevention became clear, and now a case of typhoid fever in a community is a sign of someone's negligence. Malaria, a disease which was common enough in the early days of this country and more particularly in more southerly countries, was found to have been carried by mosquitoes which had their breeding places in the water of low-lying undrained lands. The same is true of yellow fever carried by another form of mosquito. This discovery and the means of the destruction of the mosquito is rapidly making these diseases a thing of the past. Increased knowledge of the causes of diseases like diphtheria, tetanus or lockjaw and of the means of their prevention and cure, have reduced the mortality of these diseases to a very low figure and a steady and vigorous application of the principles of prevention and cure will, I am convinced, rapidly wipe out these diseases entirely. Smallpox, formerly so fatal, is the most readily controlled of all communicable diseases if the public refuse to be stampeded by prejudice and ignorance. Vaccination against smallpox should be carried out in infancy. Every infant should be vaccinated before the age of three months. If this is done we shall hear little of sore arms and if the process is repeated in everyone at the age of seven or eight years, we should soon come to regard a case of smallpox as a rarity. Why is it advisable to vaccinate the child at so tender an age? Because at the age mentioned (three months) the child's nervous system is little developed and it has no terror of having the operation performed, but of greater importance is the fact that the baby is in its mother's arms, and under constant supervision and there is little danger

of getting dirt and infection into the little wound, or of having the scab knocked off and the entry of infection invited.

In medical inspection of schools the trio necessary for successful operation are the teacher, the nurse and the doctor. The teacher, for years of the child's life, is more than the child's mother, because the teacher has the child under supervision daily for a longer period than has the child's parents. It is the teacher who has the earliest opportunity to detect signs of illness and of mental and physical defects in the school child. The child is referred to the nurse and by her, if necessary, to the school doctor or to the parents. The nurse follows up all cases and should be not only a school nurse, but a general public health nurse. She should carry on school work merely as one part of her duty. It is economically wasteful to have a school nurse for the school child alone. She should be under control of the local health authorities and in the course of her duties have supervision, not only of the school child, but of the entire family.

So far we spend far too little upon the prevention of disease and what we do spend is often wasted because of faulty methods due to want of knowledge and imperfect organization. In this province medical inspection of schools, whatever little we have of it, is, with a few notable exceptions, under the control of the Boards of Education. It is a public health work and should, like other public health work, be under the control of the health authorities. The City of Toronto, not always the wisest centre in the management of its public affairs, has, however, set an example to the rest of Ontario in discarding the wasteful system of having two sets of nurses, the one for the schools and the other under control of the Department of Health, by placing the entire public health nursing service under the control of the health authorities.

But these salutary means of prevention will as we grow older and wiser be in turn discarded by applying our public health methods at an earlier and more effective period of child life, and it is here that our most valuable, effective and scientific use of the nurse will be inaugurated. We shall begin, not with the child, but with its father and mother. It would be

even more effective to begin with its grand-parents, but they shall have possibly in most cases passed beyond our reach, so we shall be forced to begin with the father and mother, chiefly with the mother.

The loss of life among young children, children in the first year of life, and particularly in the early months of life, is appalling. It is bad enough in this country, but it is infinitely worse in other places. The lowering of the birth-rate, while not serious enough with us to cause alarm, has long been a source of anxiety in countries like France and is now a matter of serious consideration in Great Britain. Neither of these subjects, relatively of greater importance to a country than any other single factor, cannot be considered as due entirely to either want of education, wealth, prosperity or ignorance. There is no country where the mass of the people are so generally well-educated as Scotland. The Scottish people have the best educational system in the world. There was no place more prosperous during the war than the intellectual City of Edinburgh, where the greatest physicians of the United Kingdom, the great statesmen, church and business men had their origin and education, yet in the period of the war the birth-rate of Edinburgh and of Scotland generally, sank to the lowest in its history and the infant mortality rate rose to a figure unprecedented in modern times. Such is the case in respect to education and prosperity. Turn to the province of Connaught in Ireland during the same period. Here the people are extremely poor; they are mostly illiterate, yet the birth-rate was more than 2½ times that of Scotland and the infant mortality rate about 1/3 that of the sister nation.

You will by this time be enquiring the reason for this great difference. It is summed up in the phrase "The mothers stayed at home and nursed their babies." In Scotland and in England, where conditions in respect to the birth and death rates were much the same, the mothers were at work and the babies suffered in consequence. They were fed by artificial means, upon which no baby has a fair chance. With us until recent years, the mother did not go out to work. This custom is increasing and its continuance and increase are a menace to

the future of the nation. No mother can meet the needs of her future child if she works in a factory, and no baby has a chance without the breast-feeding and mothering which none but a mother can give. The modern pleasure-loving customs of our civilization interfere with the mother-care even among the well-to-do and it has become all too common to dispense with breast-feeding of the baby for the convenient expedient of feeding by hand.

Is it possible to mitigate these evils? The example of such countries as Norway, Sweden, Denmark, New Zealand and Australia, as well as the results of public health work in this and other countries, make it certain that these evils may be largely removed. The infant mortality rate of large centres such as Edinburgh, Bradford in England is about 132 per 1000 births. That of Ontario is about ninety-nine. Montreal runs into the 200 class, while New Zealand and Australia are from thirty-five to fifty, and Norway, Sweden and Denmark about sixty.

Let me tell you how success has been reaped in some of these countries. New Zealand is a shining example to the world. It is true the population is a favorable one for such an experiment, being mostly English, Irish and Scotch. The climate is a good one. There is no great poverty and no great riches. Some twenty or thirty years ago, the wife of the Governor of New Zealand, Lady Plunkett, with the advice and assistance of a local physician, a doctor from Edinburgh, conceived the idea of doing something for the babies of New Zealand. She was not socially popular. She did not, much to the disgust of the fashionable circles of the capital, enter into the social life there. As she explained, she had seven children and had no time for social affairs. So she and Dr. Truby King gathered together a few nurses, trained them in maternal and child welfare work, and set out to train the mothers of the country. They began by having these nurses form community health centres where the mothers were induced to come for instruction, where young girls were trained for the duties of motherhood, and where the ills of childhood were detected and means devised for their correction. A small hospital was established where for a week or

two a tired mother worn out with the struggle of caring for an ill-fed baby might come to learn how properly to care for her baby. The community was induced to secure a trained nurse to do public health and follow-up work after the nurse instructor had moved on to carry out her work elsewhere. The work at first was, and largely at present is, chiefly managed by voluntary aid. It has grown tremendously and its results are seen in the lowest infant mortality rate in the world, and in the sturdy fighters furnished by that young Dominion to the aid of the mother-country in the Great War.

The Board of Health is just entering upon work of the same character and in a somewhat similar manner in Ontario. At the session of the Legislature just closed the Board has induced the Government to provide the sum of $40,000 for the purpose of beginning the organization of a Maternal and Child Welfare Division.

It is proposed to organize the work somewhat after the following plan: Well-trained nurses to the number of eight or ten, will be secured, paid good salaries, and given a course of two or three months in the type of work they are to do along the lines of the course pursued in New Zealand. These nurses will be called *District Nurses*. Each district nurse will establish herself in a small town or village. She will have a motor car by means of which she will be enabled to get about the adjoining country and encourage the mothers to come to her meetings. The assistance of influential men and women will be secured and a *Community Health Centre* established. The health centre will be encouraged to secure a public health nurse for themselves to carry on intensive public health and baby welfare work along the lines pursued by the district nurse. Every community has men and women willing and anxious to do work of this kind.

It is proposed to employ a well-trained dietitian in the Board of Health, who will be able to furnish instruction in suitable dietary for children. Letters of instruction will be sent to mothers and prospective mothers detailing information in the care of both mothers and their babies. In short, it is hoped to make the Board of Health a centre of information to which

any mother or prospective mother may appeal. If the local health centre is unable at first to raise sufficient funds to employ a nurse, we hope to be in a position to afford some financial assistance.

Each district nurse will be supplied with a small and inexpensive exhibit which will illustrate the proper dress, diet, and generally the means whereby a baby may be properly cared for. The lives of many mothers and of many babies would be spared if the mothers were properly supervised before confinement. The statistics of the last two years of the Burnside Hospital in Toronto illustrates this.

RECORD OF OBSTETRIC CASES, BURNSIDE LYING-IN HOSPITAL, TORONTO

For the Last Two Years.

	Semi-private cases.	Public Ward non-supervised cases.	Public Ward cases supervised by clinic.
Number of cases..	1,198	505	461
Deaths of the mother	10 (0.8%)	18 (3.5%)	2 (0.4%)
Still-births	45 (4%)	40 (7.9%)	6 (1.3%)
Eclampsia (Convulsions)	20 (1.6%)	16 (3%)	2 (0.4%)

Patients are required to come to the clinic every two weeks. Regularity counts! The physician-in-charge says: "The most important factor in this work is the Public Health Nurse."

In addition a strong motor-truck will be purchased and mounted with a travelling Baby Welfare Clinic, having a trained nurse and children's specialist. This will be called our *Child Welfare Special*. By means of this equipment we intend to carry on baby clinics throughout the country villages and towns, thus bringing the advantages of the city directly to the country. It is not our intention to treat cases. We do not propose to interfere with, but rather to assist the doctor. The clinic is designed to point out to the mother existing defects in the growth or development of her baby, so that she may be encouraged to secure proper medical care for her child. This clinic will supplement the work of the district nurse, and if the entire plan is as successful as we are encouraged to believe it

will be, it is hoped that its success will encourage the public and their representatives in the Legislature to afford the Board of Health adequate funds to carry this work throughout the length and breadth of Ontario.

The Board has been much encouraged by the interest which has been aroused with respect to public health during the last ten years. In 1910, the appropriations for public health in Ontario were about $50,000. For this year those appropriations are $531,000, a sum which is much greater than that supplied for public health work in all the other provinces and of the Dominion of Canada put together.

The value of Maternal and Child Welfare work to a country may be summed up in the words of the eminent and world-renowned progenitor of the modern nurse, whose centenary has just been celebrated, Florence Nightingale, who said: "If the babies of England are kept well and clean for the first two years they would be the greatest asset of England.

The value of work of this kind has become so appreciated in England that at the beginning of this year there were 1,718 Maternal and Baby Welfare Clinics established in that country, of which 331 are conducted by county councils, 679 by voluntary societies and 708 by the health authorities.

To the young women who have received their diplomas from this hospital to-night, I should like to offer my congratulations upon the completion of their long and arduous course of study, and to offer them a very few words of advice. In the pursuit of your chosen profession you will gain in many cases the innermost circle of family life. You will have the nursing of sick people, who, because of pain and suffering, are troublesome to manage. This work will be difficult and tiresome. In country districts, particularly, and in most of homes, the convenient facilities of a hospital will not be at hand. You will, on the one hand, find it necessary to be loyal to the physician in charge, and to conciliate the too frequent complainings of anxious relatives of the sick patient. You will need to have wisdom, the capacity to see and hear of things which must not be repeated. You will require to be possessed of tact, endurance and patience. In the performance of your duties in which there can be, if

success shall follow, no slackening of effort, you must be careful of your own health, the loss of which would be fatal to success. Be reconciled to all this, however, in view of the fact that many before you have successfully trodden the thorny path I have pointed out. I have had a somewhat extended experience of nurses and invariably they have fulfilled all that has been required of them. Their record with the army has been one of which Canadian nursing schools may well be proud. Every soldier who has been unfortunate enough to enter hospital has nothing but praise for their fortitude, endurance, patience and devotion to duty. They have been angels to the wounded and sick men. Under the most dangerous and difficult conditions on all fronts of the war, nothing but the greatest praise can be given to the 3,000 Canadian girls who volunteered for service.

My best wishes and sincerest hopes for your future success and happiness are given you. Earnestly set your face to the daily duty and you shall not fail.

DEATH OF DR. W. J. GIBSON, OF BELLEVILLE

Dr. W. J. Gibson, of Belleville, died on October 7th, at the Mayo clinic, Rochester, Minn., as a result of an operation which took place a week before for the removal of gall stones. Dr. Gibson was about 70 years of age, and had practised in Belleville for forty years. He was a Master of Arts and taught High School for some years before entering upon the study of medicine at Queen's. He enjoyed a very wide and successful practice in medicine and was noted as a surgeon. He was a prominent Mason.

Therapeutic Periscope

ACTINOMYCOSIS

Experience with the radium treatment of actinomycosis is reported by S. A. Heyerdahl, Christiania, Norway (*Journal A. M. A.*, Dec. 27, 1919). Several cases were thus treated, using from 4 cg. to 30 cg. tubes of the element, in twenty-four-hour treatments, with good success. The applications were made at rather long intervals, each one lasting twenty-four hours, often weeks or months apart. A lead filter of from 1 to 2 mm. in thickness was used in some of the cases. The improvement was marked in all, though the cases had reached an advanced stage, and in most a permanent cure is announced.

QUININ IDIOSYNCRASY

The fact that some persons are abnormally sensitive to quinin, and have, therefore, what might be called a quinin idiosyncrasy, has been long known, and the facts that a specific skin reaction can be developed as demonstrated by Boerner in *The Journal* of March 21, 1917, and confirmed by the experiments of O'Malley and Richey, is pointed out by B. M. Edlavitch, Fort Wayne, Ind. (*Journal A. M. A.*, Dec. 27, 1919). He reports a case of a patient of his own who showed this skin reaction, and who acknowledged that she was sensitive to the drug. It was produced by taking a pill of iron, quinin and strychnin, containing one-quarter grain of quinin. It produced an immediate sensation of drawing over the center of the chest lasting some time, and was followed by a general urticaria lasting about thirty-six hours. Her case presented an opportunity to test the skin reaction described by Boerner, and accordingly on two oc-

casions abrasions on the arm were treated with 10 per cent. watery solution of quinin bisulphate. The reaction was striking and unmistakable. Within a few minutes a reddish erythema appeared, which began to subside in a half hour and had completely disappeared within a few hours. It seems to be a specific reaction, occurring only in sensitive individuals, and, as a test for hypersensitization to the drug, it should be of value.

SEROUS MENINGITIS

A CASE of what seemed from the symptoms to be meningitis, following antitetanic serum injection, is reported by Oscar Berghausen, Cincinnati (*Journal A. M. A.*, Dec. 13, 1919). The patient, aged 3½ years, had stepped on a nail. Two days later the wound was opened and cauterized, and 2,000 units of antitetanic serum injected. A typical serum rash developed a week later, but soon subsided. The meningitic symptoms appeared four days after this and spinal puncture was advised. Fluid came out under great pressure, was clear and contained no cells, no globulin increase, and gave a negative Wassermann reaction. Within two hours the child was quiet and sleeping with temperature nearly normal, and in two days' time was apparently well, and has continued so ever since. In Berghausen's opinion, the foreign proteins caused an anaphylactic reaction, later complicated by the development of an acute serous (edematous) meningitis.

INFLUENZA

WHAT he considers as a unique case of epilepsy or epileptiform convulsions following a severe attack of influenza in a child two years old, is reported by L. P. Clark, New York (*Journal A. M. A.*, Dec. 6, 1919). Both grand mal and petit mal attacks occurred almost daily for two weeks. The occurrence of dentition seemed to render the convulsions more severe, and mental development was retarded, temporarily. At present the attacks are less frequent and of the petit mal type, and the child is improving under hygienic, dietetic and moral treatment.

POSTPARTUM HEMORRHAGE

J. P. Gardiner, Toledo, Ohio (*Journal A. M. A.*, Dec. 27, 1919), reviews the causes of postpartum hemorrhage and points out the analogy to acute dilatation of the stomach and some other hollow viscera. He goes into detail in the discussion as to the physiologic and pathologic conditions of these organs, but especially of the uterus and its parturient processes, illustrating his remarks with three cases showing the different types of acute postpartum uterine dilation. All involuntary muscles, he holds, possess, besides the inherent qualities of rhythmic contraction and retraction, the property of functionating properly for a time after a period of stress, and of then assuming a state of relaxation, and further react on stimulation in a short time and function normally. The uterus being an involuntary muscle in structure, is subject to these same laws, which are factors of postpartum hemorrhage. Like the other muscles, it may react to proper stimulation, by manual compression and the Credé method, as shown in the three cases reported.

ARTERIAL OBSTRUCTION

The common methods of amputation in the case of arteriosclerotic gangrene are guided by the extent of the area affected, say D. N. Eisendrath and R. B. Bettmann, Chicago (*Journal A. M. A.*, Dec. 6, 1919). Not infrequently the amputation is followed by extensive sloughing of the flaps, and death follows from sepsis, or, as in a case recently observed by them, the thrombosis extends from the femoral to the iliac artery and to the iliac artery of the other side, thus involving the other limb. The ideal method seems to them to be to avoid this outcome by exposing the femoral artery at the middle of the thigh and following it up or down till the level is reached of the thrombotic occlusion of artery above which distinct pulsation can be observed in the vessel. This plan was followed in a case which they report. The patient, who had been extremely septic, made a good recovery.

Correspondence

The Editor cannot hold himself responsible for any views expressed in this Department.

Editor Canadian Journal of Medicine and Surgery.

Dear Doctor:—

The following case, or rather its treatment, may be of interest to your readers. D. F., mechanic, aet. 30. Family history good. Personal history, morphine fiend for years, taking by hypo. as high as 20 grains a day and at times taking in addition to the morphine as many as 20 grains of cocain. No illness or pain when he applied for relief from his habit. He was told he must go to hospital, which he did. He was anxious to get cured and I promised him a cure if he followed my treatment faithfully as long as required. I do not know whether this plan of treatment is given by others or not. With myself it is original and has been used by me successfully in all of the three or four bad cases which have come my way. I do not tell the patient my plan. Simply assure him I will not give him any drug from which he will have any difficulty left in place of his morphine and also that he will not suffer during the treatment. He must have no visitors and no means of secret supply. I prescribe the dose of morphia usually taken at the usual time and lessen the amount gradually. In case of D. F., he had reduced his dose to 5 grains night and morning by hypo. but could go no further himself. I insisted first on his giving up his hypo. and taking by the mouth as more convenient for my purpose, and then gave as follows:

R. Morphia sulph. grs. 320, Tr. Gent. Co., ℥ii, No. I, aqua ad ℥viii. Sig. ℥i (i.e. 5 grs.)

night and morning; and at the same time

R. Tr. Gent. Co., ℥ii, No. II, aqua ad ℥viii. Sig: ℥i. to replace the ℥i given

from the morphia so that the morphia bottle was always full and in this way the nurse was able to diminish the dose regularly, and

I judged not too rapidly. When the No. II is emptied, repeat and continue on till, for some weeks, patient is taking practically no morphia. I think it wise not to let him know what is being done, but keep him under close observation to prevent fraud. Feed him well and attend to general hygiene, and if the reduction proves too rapid, lessen the reduction. If nervous give an occasional bromide. The patient must be anxious for his cure before treatment begins. In the case of D. F., he reports after five months free from drug that he has no desire for it and is now looking well and working at his trade and very happy and grateful.

Yours,

W. J. W.

380 Bloor Street West, Aug. 16th, 1920.

Personals

COLLEAGUES HONOR DR. McPHEDRAN

To do honor to their old friend and teacher Dr. Alexander McPhedran, former Professor of Medicine in the University of Toronto, several colleagues in the medical profession and almost 150 former students assembled on September 24th to a banquet in Hart House, when a splendid portrait of Dr. McPhedran was unveiled and he was presented with a handsome bag.

Dr. C. K. Clarke, of Toronto, in an interesting address on "Early Recollections," recalled some of the early days of the medical profession, and the transition that he and Dr. McPhedran had seen take place.

Some personal reminiscences of Dr. McPhedran were contributed by Dr. F. N. G. Starr, while Mr. I. H. Cameron paid a notable tribute to the work of the distinguished guest in a short address on "Dr. McPhedran as a Colleague."

To Dr. McPhedran as a teacher, Dr. Lewellys F. Barker, of Johns Hopkins University, who unveiled the portrait, paid high honor.

Present at the ceremony from other places were: Dr. R. G. Snyder, New York; Dr. J. E. Bowman, Connecticut; Dr. F. J. Farley, Trenton, Ont.; Dr. John P. Morton, Hamilton; Professor A. B. McCallum, Ottawa; Dr. A. McKinnon, Guelph; Dr. T. W. McKay, Oshawa; Dr. W. B. Beasley, Galt; Dr. B. J. Conley, Ottawa; Dr. John Phillips, Cleveland.

Dr. D. King Smith has removed his office to 122 Bloor Street West, Toronto.

Dr. J. N. Gardiner, 74 College Street, has removed to 206 Bloor Street West.

The Physician's Library

Diseases of Children. Presented in two hundred case histories of actual patients selected to illustrate the diagnosis, prognosis and treatment of the diseases of infancy and childhood, with an introductory section on the normal development and physical examination of infants and children. By John Lovett Morse, A.M., M.D. Third edition. Boston: W. M. Leonard, publisher. 1920. Price $7.50.

The advantages of the case-history method of teaching medicine are very apparent in this useful third edition. The two hundred selected cases cover a very wide range, meeting easily the needs of even an extensive general practice. As a rule a striking picture is presented of the main features of each disorder or disease discussed. The same order is followed in each case, a rapid pointed survey of history, physical examination, diagnosis, prognosis and treatment being given.

This record of cases is preceded by about fifty pages on "The Normal Development and Physical Examination of Infants and Children," which is sufficiently full to be of much value to any one charged with the professional care of children. The author will have difficulty in inducing many to accept his statement (p. 19) that the drooling of infants has nothing to do with dentition beyond mere coincidental occurrence, but the absence of mere theorizing and suggestion of doubts in diagnosis and alternative methods of treatment is a great relief to the practitioner in search of positive and definite advice in his difficulties.

The Great War and the R.A.M.C. By Bt.-Lt.-Col. F. S. Brereton, R.A.M.C. Constable and Co., Limited, London, 1919.

This historical record of the activities of the R.A.M.C. during the first two months of the Great War has the official facts

woven into a romance well worth reading. It deals mostly with the field ambulances and the units in the rear and may be said to have missed that part of the R.A.M.C., namely, the Regimental Medical Officer and his stretcher bearers, upon whom so much could be written. In this way it lacks a certain vividness and reality. It portrays the difficulties encountered in the evacuation of the wounded when horse ambulances proved a dismal failure in the war of movement from Mons and up to the Aisne, and gives many instances which display the bravery and pluck of all ranks.

An appendix gives the official report on the Typhus epidemic at Wittenberg camp setting forth the evidence from the survivors, which shows all the horrors of Wittenberg and the the culpability of Germany.

Diseases of the Intestines and Lower Alimentary Tract. By Anthony Bassler, M.D., Professor of Gastro-Enterology, Fordham University Medical College and New York Polyclinic Medical School and Hospital; Visiting Physician, New York Polyclinic Hospital; Fellow of the American College of Physicians and the New York Academy of Medicine, etc., etc. Illustrated with 154 text engravings and 62 full page half tone plates (with over 70 figures), some in colors. Philadelphia: F. A. Davis Company, publishers. English depot: Stanley Phillips, London. 1920. Price $7.00 net.

Dr. Bassler has dedicated his book to the practitioners of Medicine, "*Optimi Amici Humani Generis.*" He has kept the context as clinical and close to the actual cases as possible. Histopographical descriptions and illustrations and review of present ideas on the physiology and digestion will be read with interest. His method of examination and history taking are instructive. The changing X-ray studies are illuminating. Chapters are devoted to the much discussed intestinal toxemia and its treatment to catarrhal conditions, ulcerative processes, appendicitis, abnormal anatomical changes—dilatations, diverticula, ptoses, neoplasms and the all prevalent constipation.

He calls attention to the frequency of neurasthenia as a result of disorders of the intestines. He gives a fine discussion on the various parasites which infest the alimentary tract (with illustrations) and closes with a very practical chapter on those common diseases of the rectum and anus with which we are all so familiar. His paragraphs on treatment will be appreciated by the reader, whether he be a physician or surgeon. We predict a wide distribution of his work.

A *Study in the Epidemiology of Tuberculosis*, with especial reference to tuberculosis of the tropics and of the negro race. By George E. Bushnel, Ph.D., M.D., Colonel, United States Army (Medical Corps), retired. New York: William Wood & Company. 1920. Price $2.75.

The author calls attention to the invasion of various non-tuberculous districts—fine resorts—by tuberculous individuals who have unfortunately communicated the disease to imperfectly immunized natives who are subject to the acuter types of phthisis. He holds that the effect of sanitation in preventing infection is overrated, as shown by the experience at a certain health resort where for many years consumptives lived in closest contact with the inhabitants of the town without any pretence of "hygienic care." A sanatorium, Dr. Bushnell writes, though the best conducted in the world, is a place of the greatest danger to the unimmunized individual. Sanitation is an excellent thing, but much harm has been done by giving credit to it instead of to a previous immunization. In connection with treatment the author recommends patients not to go away far from home unless they can afford to. Repose of mind is as important as repose of body. It is especially important to reassure the patient as to the possibility of improvement in view of the widespread prevalence of the idea that the tropical climate forbids recovery. "The tripod of treatment" in the tropics as elsewhere is rest, good food and fresh air.

Pope's Manual of Nursing Procedure. By Amy E. Pope, formerly Instructor in the School of Nursing, Presbyterian Hospital, New York; Visiting Instructor, San Francisco, Cal. New York and London: G. P. Putnam's Sons, The Knickerbocker Press. Price, $2.40.

This volume leaves out all references to bacteriology, dietetics, chemistry, and other theoretical stuff found in so many books on nursing—and gives full descriptions of the actual practical nursing work. A much needed book at this period when so many women are entering the practical nursing field following their V.A.D. work in the war. Medical students and general practitioners would do well to study the volume, because the text-books of the medical curriculum are strangely silent on these topics. Many a general practitioner must show the patient or the family—where there is no regular nurse—how the procedures he orders for the patient are to be carried out.

Shell Shock and Other Neuro-Psychiatric Problems. Presented in 589 histories from the war literature, 1914-1918. By E. E. Southard, M.D., Sc.D., with a bibliography by Norman Fenton, S.B., A.M., and an introduction by Charles K. Mills, M.D., LL.D. Boston. W. M. Leonard, publisher, 1919.

A review of this book cannot begin to do justice to such a masterly survey of the psychiatric side of the war.

To those who have had experience with cases of this type, in war or in peace, this volume will prove to be of great value, not only to the psychiatrist, but to the internist and the neurologist.

The book is divided into sections dealing with (1) the syphilopsychoses, (2) hypophrenoses (feebleminded), (3) epileptoses, (4) pharmacopsychoses (alcohol drug), (5) Encephalopsychoses, (6) Somatopsychoses, (7) Senile and presenile states, (8) Manic depressive group, (9) Psychoneuroses, (10) Schizophrenoses (Dementia Praecox and its allies), (11) Psychopathoses.

These groups are accompanied with case histories, 589 in all, giving details, course and conclusions, making it a most interesting and readable volume. The cases are gathered from French, British (Imperial and Colonial), Italian, Russian, American, Austrian and German authors.

Two hundred and sixty-two pages are devoted to the above groups, some two hundred and fifty to war neurosis or "shell shock," and the remainder to diagnosis and treatment in the form of case records and in short form.

This book was the last work of the late Dr. Southard, and it is with a feeling of deep regret one feels that the field of mental hygiene has lost such an outstanding man in such an important stage of its development.

ERIC KENT CLARKE, M.B.

Diet in Health and Disease. By JULIUS FRIEDENWALD, M.D., Professor of Gastro-Enterology in the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore; and JOHN RUHRAH, M.D., Professor of Diseases of Children in the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore. Fifth edition, reset. Philadelphia and London. W. B. Saunders Co. 1919. Octavo of 919 pages. Cloth, $6.00. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

This writer has dedicated his book to Sir William Osler, which of itself seems to bring it closer to every Canadian medical man or student.

Dietetics has, as this writer very properly says, been a subject much influenced by fads and fancies, and hence the value of a proper diet had fallen into disfavor. In this book the reader finds a great deal with regard to the composition of foods, which is of much value and interest. This is built upon a scientific basis for the various diets, and is so written that the practical directions can be understood even by many laymen. The type is large, the subject matter well put together, all forms of diet, whether for infants or grown-up people, both

in health and disease, is thoroughly explained; the question of alcohol is discussed from the scientific standpoint and in a broad and general way. This volume is much larger than the last edition, which was published some years ago, and has many new and very valuable recipes, directions, tables of chemical compositions of American food materials, full diet tables for every form of disease, and also the food values of the various articles that are commonly eaten.

This is a book that will be read with a great deal of interest by a large number of practitioners, both surgical and medical, and in which they will find an elaboration of the whole question of diet most thoroughly carried out and explained.

Orthopedic and Reconstruction Surgery, Industrial and Civilian, by Fred H. Albee, New York, N.Y., published by W. B. Saunders Company, Philadelphia and London. Canadian agents: The J. F. Hartz Co., Ltd., Toronto, 1919.

This book has now been in the hands of the booksellers for some months, and has already attained great popularity throughout the profession. In many ways it is a remarkable book. Although it is a work of over one thousand pages the interest of the reader is never allowed to lag. Every chapter, and often every page, contains something new and original. Many of the new ideas are based on true scientific investigations, which are duly recorded; others are the result of a highly developed imagination and will probably soon be forgotten. But one has always to admit that, whether scientific or chimerical, the ideas and suggestions in Albee's book are always entertaining and are sometimes of the greatest surgical value. Naturally the central theme of the book consists of propaganda in favor of the use of the bone-graft. Bone-grafts are advocated for every imaginable condition and truly marvellous results are promised if the author's technique is rigidly followed. While it is perfectly evident that the writer has been carried away by his enthusiasm for his subject and that the millennium in bone surgery has not yet been reached, nevertheless the reader will be struck by the excellent results which undoubtedly have been obtained and by

the clever and ingenious methods devised and described by the author. It is this enthusiasm for bone-graft surgery, however, which destroys the value of this book as a standard text-book on orthopedic surgery. The writer is apparently a man obsessed with one idea which he is trying to apply in one form or another to every condition met with in surgery. For this reason, he is bound to fail in an effort to write a text-book of any kind, as he can never prevent himself from writing what he wishes to believe rather than what he knows to be true. Such an enthusiasm as the above, however, is more of a boost than a slam, for nobody loves a text-book, and we all admire that which is original and new. Albee must always be given the credit for popularizing the use of transplanted bone in surgery and for making a really tremendous change in the surgery of bone. Every surgeon who proposes to do bone surgery should have in his library a complete set of Albee's works.

Cunningham's Manual of Practical Anatomy. Revised and edited by Arthur Robinson, Professor of Anatomy in the University of Edinburgh. Seventh edition. Volume first and second. Superior Extremity; Inferior Extremity. Thorax, Abdomen, Pelvis. With 203 and 231 illustrations respectively, many of which are colored. New York: William Wood & Company. Edinburgh, Glasgow and London: Henry Frowde and Hodder & Stoughton. Price, of each volume, $4.00.

In this edition the general text has been revised and many new drawings of dissections, sections and radiographs introduced. Instructions for dissections are printed in a distinctive indented type. A third volume is forthcoming, so much as the copy increased. To one who plugged his anatomy thirty years ago, listened for hundreds of weary hours to didactic lectures on the subject and did a minimum amount of actual dissection—the examination of this work makes him see how much he lacked, and feel that he would like to do his dissection again under the direction of a "Cunningham," with the added opportunities for

visualization of many of the anatomical structures—bones, injected arteries, etc., through a study of the numerous radiographs. Every student, of course, well found this new work of exceeding value, and every general practitioner who wishes to keep his anatomy at all fresh would do well to secure these splendid volumes.

Electric Ionization. A practical introduction to its use in medicine and surgery by A. R. Friel, M.A., M.D., (Dub.), F.R.C.S.I., Bristol: John Wright & Sons, Limited. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited. 1920. Cloth bound 8/- net; paper covers 6/- net.

This work presents a study of the chemical effects of electricity used therapeutically. The author explains first what he means by ionization and how drugs may be introduced by means of it to various parts of the body. He then deals with the equipment needed, an explanation of terms, effects of different ions, and the technique suitable. The method is applicable to many ailments, manifested in local parts. It is not a panacea, but an adjuvant to other measures.

Sir Victor Horsley. A Study of His Life and Work. By Stephen Paget. Illustrated. London: Constable and Company, Limited, 1919.

Our Canadian brethren who would like to read something as fascinating as a romance should secure this splendid biography to read on Sundays, while their wives are at church and the children at Sunday school. It is quite absorbing. Horsley was in Toronto some years ago—at the B.M.A. meeting here, if we remember correctly—the guest of Dr. Herbert A. Bruce. He gave the address in Surgery, spoke in the section of Physiology, giving an account of his recent work with R. H. Clarke. He also delivered an address at the Ontario Branch of the Dominion Temperance Alliance, along with Sims Woodhead. This surgical address was one of his most important contri-

butions to medical science—and he had contributed many scores. He reviewed in this address the whole field of brain-surgery, his biographer states, with special reference to his own cases of cerebral tumor at Queen's Square Hospital for Paralyzed and Epileptic. He spoke of the want of definite agreement over the question. How long ought such cases to be under medical care? At Queen's Square it was about three months. Unfortunately this view of the situation had not been discussed with the profession. In that year he had been asked to operate on a patient with a lateral tumor of the cerebellum, who had been known to have had optic neuritis for nine years! The preceding year he had operated on a patient who had suffered from optic neuritis for thirteen years! He spoke of the great value of decompression for the arrest or improvement of the neuritis; the intra-cranial pressure could be relieved, if nothing else could be done. He exhibited lantern slides of optic neuritis—which might be termed sensational. As to the general principles of brain-surgery and the details of operating—the fundamental purpose of every detail was the prevention of shock and the maintenance of the physiological integrity of the nervous system. Chloroform was the anesthetic of choice. Oxygen was kept at hand that venous congestion and capillary bleeding might be checked. He stressed the effect of shock and the low resistance of the central nervous system. He then reported fifty-five cases of glioma, glio-sarcoma. The outlook in all such cases was bad. He hoped better surgical results would follow earlier diagnosis.

Sir Victor also attended the first meeting of the Toronto General House Surgeons' Association, along with Prof. Llewelys Barker. The gathering was held beneath a marquee erected on the beautiful grounds of the old Toronto General Hospital. Both guests spoke extemporaneously but most effectively on the value of house surgeoncies to young graduates.

Sir Victor had a wonderful career. Born and reared in a cultured and religious home, in touch with the finest minds, taught in the best schools by inspirational teachers, he made remarkable progress, both in his pre-medical, medical and post-graduate studies. He loved work and loved play. It is diffi-

cult for us Canucks to understand how such men as he managed to accomplish so much. The biography gives some hint. Horsley worked early and late, sometimes all night. In the text are sufficient of his letters to give a general idea of his manner of life.

Horsley was a strong advocate of total abstinence, a hater of tobacco in any form, and was himself a man of absolute chastity. He "had no use" for the man who told the nasty story—seemed to be a man with a marked puritan strain as to life and conduct. He was an ardent supporter of female suffrage and a great student of palæontology.

Everyone says it was a great mistake for the War Office to have sent a man of his age to that Mesopotamian hell, where there was little or no surgery to do—particularly as he was nearing three score.

He died of heat stroke. Truly a great and good man—a model for every medical student. We wish they all had this book in their library.

Habits that Handicap. The Remedy for Narcotic, Alcohol, Tobacco and other Drug Addictions. By Charles B. Towns. 12mo. cloth. 223 pages. Price, $1.50 net; by mail, $1.62. Funk & Wagnalls Company, 354 Fourth Ave., New York City. 1920.

May be recommended for careful perusal by all those interested in the problems of public health, or in sociology. Obviously written for the lay reader, it contains much of interest to the practising physician dealing with the problems of alcoholism and drug addiction.

The breadth of view is to be commended and the careful way in which cause and effect are associated with proposed schemes of relief is evident throughout. The attention of reformers is directed to the fact that these social diseases are not likely to be removed from our midst by attacks directed only on the drug itself, and the statistics of increases in drug habitees following prohibitory legislation against alcohol in America are, to say the least, startling.

The attention to the toxic and psychological effect of tobacco is well timed in view of the wave of hysteria that has swept the country during the war on the subject of tobacco.

The book fills a want and is written so that one does not require a medical dictionary to attain an understanding of its purpose and the way of attainment thereof.

Sexual Impotence. By Victor G. Vecki, M.D., San Francisco, Cal. Sixth edition, revised. Philadelphia and London: The W. B. Saunders Company. 1920. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. Price $3.00 net.

It is seldom, if ever, that any author of a work on such a subject as that of Sexual Impotence has lived to see a sixth edition. Such a fact but goes to show that if in years that are past the subject has been more or less avoided, a book plainly written, giving facts as they are, has a place in scientific literature. Dr. Vecki is to be congratulated upon his boldness in refusing to soft-pedal upon a definite Department of Medicine, knowledge about which is far too limited.

Teaching the Sick—A Manual of Occupational Therapy and Re-education by George Edward Barton, A.I.A., Director of Consolation House: President Consolation House Convalescent Club Inc. Illustrated. Philadelphia and London: The W. B. Saunders Company. Canadian agents: The J. F. Hartz Co., Limited, Toronto. 1919.

The purpose of this book is to give a clear, concise and truthful account of what has been actually accomplished in the way of occupational therapy and re-education—not only the accomplishments of the author himself for his own body, but also what that work has actually proved for others, both patients and pupils. Moreover, to do that not only in such a manner that the means by which his own re-education, both physical and spiritual, was accomplished, will be clear and in such a way that it will be possible for others to accomplish a like beneficial result by the same methods.

COMMERCIAL DEPARTMENT

TREATMENT OF THE PAROXYSM OF ASTHMA

The attention of our readers is invited to the brief article on "Adrenalin in Medicine" which will be found in the advertising section of the current number of this journal. While, obviously, this space is purchased for advertising purposes by Messrs. Parke, Davis & Company, it has been put to a novel use by the publication therein of a scientific essay of unusual merit in which a vexatious problem is discussed.

Whatever intelligence the future has in store on the pathology of asthma, the present state of our knowledge justifies the use of any dependable therapeutic measure for the relief of the acute paroxysm. Morphine is objectionable for reasons that are generally accepted. Per contra, Adrenalin does not narcotize the patient. It affords him almost instant relief, with no disagreeable sequela to mar the effect. To quote from the announcement under consideration, "Adrenalin is the best emergency remedy for the treatment of the asthmatic paroxysm at the command of the physician."

Two to ten minims of the 1:1000 solution are injected subcutaneously or into a muscle, relief usually following in a few moments. The addition of an equal amount of Pitnitrin is said to prolong the effect of the Adrenalin.

HAS MANY VIRTUES

"When all things were made, none were made better than this: to be a lone man's companion, a bachelor's friend, a hungry man's food, a sad man's cordial, a wakeful man's sleep—there's no herb like unto it under the canopy of heaven." In these words the Rev. Charles Kingsley indicates the virtues ascribed to tobacco by the early explorers who discovered its use in America. Their opinion is confirmed in the present generation by thousands of men to whom chewing tobacco gives comfort and satisfaction.

A GOOD LOCATION

Bloor Street West, Toronto, and Lower Avenue Road are attracting many medical men. Bloor is the leading thoroughfare east and west through the city. Locations on this splendid street are good for business and make a fine investment, as properties along it are rapidly advancing in value. The corner of Bloor and Avenue Road is considered the best location for doctors in Toronto, finely residential and not far from the best shops. What adds to its attractiveness is its proximity to the Hampton Court Garage, at 162 Cumberland Street, just a minute's walk from this busy corner. Here is the doctors' rendezvous. Here they keep their cars, have them repaired, washed, watered, aired. The young men employed are alert, efficient and courteous. Rents run from $10 to $12 per month; charges for cleaning, repairing and overhauling moderate. Autos are kept for hire and a full line of accessories are kept in stock.

H. Hambledon, Proprietor.

DETERMINATION OF VITAMINE CONTENT

The author states how desirable it is to be able to determine definitely, quickly and quantitatively, whether a substance or preparation contains vitamines or not. Brearandat and others have asserted that secretin and vitamine are identical; if this is the case, the amount of pancreatic juice which is secreted in a given time after the injection of the substance to be examined might be an indication of the quantity of vitamine contained in that substance. For we know from experiments of Bayliss and Starling that injections of secretin do cause such an increase. Dogs were used for the experiments; these were narcotized with morphine, a duodenal fistulous opening was made and a cannula passed into the pancreatic duct. Secretin was injected into the jugular and after its stimulating action had ceased, a filtered extract of rice bran vitamines was injected and in one experiment a final injection of a further amount of secretin. These experiments showed that the effects of secretin were different from

those of vitamines: therefore the two substances are not the same, the former stimulating the pancreatic secretin, the latter not doing so.

The author also demonstrated that the intravenous injections of a watery solution of a filtered bran extract caused almost immediate death of animals: this poisonous action was due to the contained potassium salts; and, therefore, should it be decided to inject vitamine solution intravenously for certain purposes, these should be deprived of their potassium salts. (Meded-Gences Lab. de Weltevrodon, 1918, 3rd. ser. A. Nos. 1 and 2, pp. 99-104, C. J. Jansen).

THE HORMONES

Hormotone, a pluriglandular hormone tonic, is a combination of the dynamogenic hormones, the deficiency of which is the principal source of asthenic conditions.

Hormotone contains the hormones of the thyroid (1-10 gr.), pituitary (1-20 gr.), ovary and testis. Each constituent in Hormotone is in physiologic sympathy and therapeutic harmony with the others.

Hormotone has a markedly stimulating effect on metabolism and oxidation, and causes an increase in mental, nervous and muscular activities. It is indicated in all asthenic conditions: neurasthenia associated with hypotension; premature senility and the debilities of old age; menstrual disorders and climacteric disturbances; chronic cardiac cases with hypotension, circulatory stasis and cold extremities, and in many convalescent conditions especially after exhausting diseases.

Hormotone Without Post-Pituitary (but containing Anterior Pituitary) should be used instead of the regular formula in neurasthenic conditions associated with hypertension.

Hormotone Without Post-Pituitary is designed to take the place of Hormotone without Pituitary which was prepared for the treatment of hypertensive conditions. The former preparation is now believed to be more effective and will soon be stocked generally by druggists. Hormotone without Pituitary can be obtained until the new preparation is available.

The dose of either preparation is 1 or 2 tablets three times daily before meals—not more than 6 per day.

Hormotone and Hormotone Without Post-Pituitary are put up for physicians' prescriptions in bottles of 100, 500 and 1,000 2½-grain tablets.

A well-known American physician says: "No medicine of this character has ever before been devised that produces the uniformly good results when used in suitable cases as does Hormotone, and it has come to be my main reliance in a certain class of neurasthenics with a loss of tone in the general musculature."

Another practitioner writes: "In selected cases Hormotone is of definite and unmistakable benefit, especially in those cases of nervous exhaustion in which there is a tardy response to the usual methods of rest and forced feeding. When one finds a patient improves under Hormotone the improvement is usually consistent and permanent."

An English clinician, Dr. T. Bodley Scott, writes: "You were so good as to put on the market some time ago, partly I believe in consequence of an article of mine in *The Practitioner*, a new Hormotone Tablet which contained no post-pituitary. This I have found very valuable, as one can give it freely in elderly people whose blood pressure is above normal. I have found that your Hormotone Without Post-Pituitary not only does not raise pressure, but that it has a decided effect in lowering it. In nearly all my cases in which a gradual reduction of pressure is wanted, I think it is one of the most valuable remedies we have. The nitrites, of course, produce the more immediate effect, but one not nearly so lasting. Hormotone Without Post-Pituitary causes no gastric disturbances like the iodides, and no headache like the nitrites."

In *The Practitioner* for November, 1917, Dr. Scott again refers to the value of Hormotone Without Post-Pituitary. He cites an astonishing case in which (the patient apparently being *in extremis*) Hormotone Without Post-Pituitary had a surprisingly good effect.

AN IDEAL RESORT FOR CONVALESCENT PATIENTS

Physicians have frequent opportunities of referring those convalescing from illness to a resort where they can quickly recover their old-time vigor and enjoy an almost ideal climate, 2,500 feet above sea level. Such a resort is Virginia Hot Springs, just one night out of New York. The management have spent a huge sum of money on this choice spot in "Old Virginny," and are anxious that the Canadian medical profession should continue to refer cases there, as they have done in years gone by. The Homestead Hotel is one of the handsomest houses in America. It is built of solid brick, containing 500 guest rooms, with many parlor suites and 300 private baths. It is spacious, dignified, quiet and restful, with magnificent mountain views on every side. It is no exaggeration to say that Hot Springs means the Homestead Hotel. The Company owns 5,000 acres surrounding the hotel, so that physicians can understand that their patients have every opportunity of enjoying outdoor life and regaining thereby their normal strength.

The dominant factor making Hot Springs world-famous is the cure in which the climate as well as the water assist. The waters are conducted by gravity to the bathhouse and distributed fresh from the ground to the bathing apartments on different floors without loss of heat or its increase by artificial means, and fully charged with all their gases and other health-giving qualities. At none of the celebrated places in Europe, and at no other springs in America, is the temperature prescribed for hot baths that at which the water actually emerges from the earth in the natural springs.

The springs are beneficial, not only for bathing, but for drinking. Besides the hot springs, the effects of which as drinking waters are pronounced, there are magnesia, sulphur, and soda springs within the grounds, and alum water from a spring not far distant. The water from the soda spring comes strong and clear from the ground at a uniform temperature of 74 degrees. Physicians should address for full information Christian S. Andersen, Esq.

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Editorial

MR. IRVING HEWARD CAMERON

THROUGH the fluxion of time, by reason of the University age-limit ruling, Mr. Cameron's tenure of office as Professor of Surgery in Toronto University has expired, and, automatically, the position has become vacant. We warmly felicitate Prof. Cameron on occupying this important post with so much distinction and for so long a time—some thirty years. To those of us who remember his appointment, the time seems but short since the mantle fell upon him which was worn by W. T. Aikins, the man who (he avers) taught him all the surgery he (Mr. Cameron) knows. This confession indicates his own humility and is a tribute to the great and good man whom he succeeded.

Mr. Cameron has been a shining light in our pro-

fession. Dignified and courteous, cultured and kindly, he exemplifies the highest traditional characteristics of the former leaders of our profession. He belongs to a school of which there are only a few remaining in Toronto—a school of gentlemen of the old type. By birth and training he was highly favored, and he has not to thank himself for many of his conspicuous qualities.

Prof. Cameron is more than a surgeon; his inquiring mind has delved into the whole domain of medicine and its many ramifications. He went so far as to devote a considerable period of time investigating the claims of homeopathy, the fallacies of which became quite apparent to him.

Having a wide knowledge of medicine, he views Surgery in the light of its relation to the rest of Medicine. Further, he has studied it and practised it in its relation to science in general, and, to a lesser degree, in its relation to theology, philosophy, and history. His fine classical training enabled him to familiarize himself with the works of the early Fathers in Medicine; while his knowledge of moderns and his constant and regular pilgrimages to the British and Continental centres kept him *au courant* with all that was best in contemporary Medicine and Surgery. He has been signally honored during his career: he was elected Honorary Fellow of the Royal College of Surgeons, London, in 1900; Honorary Fellow of the Royal College of Surgeons, and Doctor of Laws (Edinburgh) in

1905. He was elected a member of the Société Interne de Chirurgie, of the American Academy of Political and Social Science, and of the British Association for the Advancement of Science.

As a token of the esteem of his Canadian *confrères*, he was elected president of the Canadian Medical Association for 1898. He was also one of the officers of the Academy of Medicine, Toronto, for some years.

Showing the regard in which his fellow-citizens hold him, Mr. Cameron was offered, but declined, a nomination to Parliament. He was one of the founders and early editors of *The Canadian Journal of Medical Sciences*, and has contributed many notable articles on surgical topics to the Canadian and British journals. For many years he was the most prominent surgeon on the staff of the Toronto General Hospital and a member of the consulting staff of the Hospital for Sick Children.

Confessio Medici says:—"Universities might arrange some cheerful yet sympathetic office that should gather into one passionate formal act a doctor's thoughts as his work drops from his hand." What Mr. Cameron's may be regarding the University work he has dropped is known only to himself. He has climbed far up the mountain and

"Thin, thin, the pleasant human noises grow,
And faint the city gleams;
Rare the lone pastoral huts——marvel not thou!
The solemn peaks but to the stars are known,

But to the stars, and the cold lunar beams;
Alone the sun arises, and alone spring the great streams."

We trust that Mr. Cameron may long be spared to enjoy his well-earned laurels, and to continue to live "*Une vie laborieuse, une succession de travaux qui remplissent et moralisent les jours.*"

COL. CORLESS AT THE ACADEMY OF MEDICINE

THE visit of Col. Albert Corless, C.B.E., F.R.C.S., consulting surgeon to King's College Hospital, London, was an interesting event. His subject was "Reminiscences of Lister and the influence of Listerism on the surgery of the Great War." It was quite a revelation to the Fellows—who hadn't been in the army—to know that the surgeons in the early part of the war fell down in their work—both in respect to organization and in the treatment of wounds produced by artillery missiles. The sneer that Listerism had failed was made by men who had not carried out Lister's principles and whose methods were as far removed from those of Lister as light is from darkness.

Col. Corless pointed out that where the principles of Lister were adopted and his methods carried out success had followed the treatment of infected wounds.

The three lines along which victory was secured

over sepsis were (1) mechanical cleansing of wounds; (2) effective and scientific use of drainage; (3) the application of new and more suitable forms of antiseptics. These were the lines along which Lister worked, and that amid the greatest opposition and much ridicule, both at home and abroad. As to gunshot wounds, there could be no question, according to Corless, that the most important element in their treatment was the careful mechanical removal of all dirt and of tissues which were damaged and thus liable to bacterial invasion.

Sir Almaroth Wright has called renewed attention to the necessity of draining of all dead spaces and creating an outward flow of the lymph by the use of hypertonic salt solution. This use of this solution should not be overdone. There was a time in the course of healing when it should be discontinued, as after this it did harm. The Carrel-Dakin solution had been used extensively and with success, but required a highly-trained nursing staff. Its use, the speaker believed, would not last. Bipp, he had seen Morrison use in a very bad extensive infective wound, accompanied by severe constitutional symptoms, with the greatest success. Bipp had come to stay. The boracic and linseed poultice was a splendid application to large open infected wounds, especially where the patient was suffering pain.

As to drainage, Dr. F. Le M. Grassett recalled, in his association with Lister, the case of Queen Victoria, who had his chief (Lister) summoned to treat her for an abscess of the breast. Having opened the

abscess amid showers of carbolic spray, he discovered there was no rubber tube with which to make drainage. Showing his resourcefulness, he clipped off a portion of the tubing connected with the bulb of the atomizer, and used that.

Lister used a 1-20 carbolic solution in which he soaked his hands, his instruments, and the operation site. He wore no gown, or cap, or face mask—merely turned up the cuffs of his frock coat. It appears his results were remarkable. By his method in his hands death from sepsis became a thing of the past. Scores of Frenchmen, Germans, and other medical men from the continent came to see him operate and learn his technique. Though he made his epoch-making discovery in the late sixties, neither the French nor the Germans in their war of 1870-71 seem to have employed antisepsis. The French did 13,173 amputations with 10,006 deaths, largely due to sepsis—75 per cent. The German statistics were equally terrible.

Col. Corless pointed out that in the so-called aseptic method heat had taken the place of carbolic acid as a germ-destroyer. He seemed to think the technique nowadays employed in the operating room was overdone—there were altogether too many frills; and the results were no better than those Lister obtained. It was not so much the sort of antiseptic or aseptic measure employed, as the man behind them.

Touching on the character and personality of Lister, Col. Corless (and also Dr. Grassett and Dr.

Baldwin, who respectively moved and seconded the vote of thanks to the essayist) spoke most eulogistically. They never heard him speak a harsh word to anyone. He was the soul of kindness—most considerate of his patients' and co-workers' feelings. He was infinitely painstaking and careful, planned his work well, and was observant of the smallest detail. Things he deemed of especial importance he did himself. He was always courteous, even to his enemies and traducers—and he had plenty of these, some of whom were closely associated with him in hospital and teaching work.

The Academy had invited the senior medical students to hear Col. Corless, and in fifty years' time some of them, becoming reminiscent, will tell the Fellows of the Academy in Toronto, and other bodies, with some pride, that they had the great privilege of hearing three of Lister's house surgeons spend an evening telling of the wonderful work of their master, the miracle worker.

Canadian Journal of Medicine and Surgery

Toronto Canada

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Original Contribution

POST-OPERATIVE CARE OF THE INFECTIVE ABDOMEN

By Fred Ewing, B.S., M.D., Kenmare, North Dakota.

In discussing the post-operative treatment of the infected abdomen it is not my hope to present any new method of treatment, but, rather, to check up on the things we have been doing, in order to avoid all possible mistakes and get a clearer conception of the best method of handling abdominal infection. These cases constitute a large percentage of the serious surgical work the general surgeon is called upon to do, and, in spite of the most modern methods of treatment, they still furnish us with a large percentage of our surgical mortality. We are all, therefore, interested in this subject, and my purpose is merely to open a discussion which will be mutually helpful. I have obtained the material for my paper by reviewing the last five hundred cases of the infected abdomen that we have had. I have tried to analyze them, and find out the things that have helped us and the mistakes we have made, that we might obtain a more accurate knowledge of the best method of procedure in future cases.

The modern treatment of general peritonitis, as well as local infections of the abdomen, has been developed very largely during the last fifteen years. The pioneer in this work was the late Dr. J. B. Murphy, whose work on peritonitis was one of the greatest, if not the greatest, contribution to medical science made by this really wonderful teacher. It was my good fortune to be Dr. Murphy's interne at the time he was doing this pioneer work, and I can well remember when he reported the thirteenth case of general peritonitis that he had saved by his

method of treatment. This was in 1906, only thirteen years ago, so we see that this subject in its modern phase is really very recent. So successful was his work, and the work of other surgeons of that time, that their methods were very rapidly adopted by a large majority of surgeons, and with some slight modifications and improvements are generally practised to-day.

I shall not attempt to take up the discussion of the different sources of abdominal infection, or to discuss the operative procedure which is taken to remedy these conditions, but will confine my paper to the post-operative treatment. It is true that the treatment will vary somewhat, depending upon the source of the infection, the location of the infection in the abdomen, and the infecting organism. There are, however, certain general principles underlying the treatment of these cases which we can discuss and apply to a large percentage of cases of abdominal infection.

In general, infection of the pelvis, especially gonorrhea, is not so dangerous to life, nor does it cause as severe symptoms as infection higher up in the abdomen. A walled-off infection will cause much less in the way of general symptoms, and is accompanied by much less danger to life than an infection which is not walled off. I think we might say the higher up in the abdomen the source of infection the greater the danger to life. The danger, of course, will also vary with the virulence and type of organism causing the infection; but we shall consider the general principles underlying the treatment of all infections of the abdomen, rather than of any particular infection.

Assuming that the patient has been operated on—that the source of infection, whether it be a gangrenous appendix, a ruptured bowel or gall-bladder, or a pus tube, has been taken care of and drainage established—what, then, is our immediate post-operative care? The patient is put to bed in Fowler's position. The extreme Fowler's position is not necessary in these cases, but the patient should be in a semi-recumbent position, enough so that the pus drains down towards the pelvis. In order that the patient may get the quiet and rest desired it is necessary that there should be some support under the buttocks, and a comfortable back rest so that the patient can rest

in comfort in this position. This is very necessary because one of the chief things in our early treatment is to keep the patient as quiet as possible. The purpose of the Fowler's position is, that the pus may drain into the pelvis where there is less absorption and also where it can be reached by the drainage that has been established. An exception to this rule would be a local infection in the upper abdomen, where the patient would not be put in the Fowler's position; but, if there is a general infection, even in the upper abdomen, there should be drainage in the pelvis, and the patient put in this position. The patient should be kept in the Fowler's position for at least the first week, and probably better for eight or ten days. After this there is no special advantage in the Fowler position because any pus that may still be in the abdomen should be walled off.

The patient should be given nothing by mouth for at least three or four days in a case of general peritonitis. The time at which he can begin to take liquid by mouth will depend, to a certain extent, upon whether or not complications arise, but in an uncomplicated case of general peritonitis, liquids by mouth can be given sparingly after the third or fourth day, and gradually increased until he is taking sufficient liquids. If the patient is in shock or his condition serious, he should be given a quart of normal saline under the skin before he leaves the operating table. This will furnish as good a stimulant as can be given, and also supply the immediate need for liquid. In a large percentage of these cases liquid has been withheld previous to operation, and the body is in great need of it; therefore, I believe, we should make it a rule in all serious cases to transfuse the patient before leaving the operating room. When the patient is in bed liquids are furnished by giving normal saline per rectum continuously. The amount of normal saline that should be given during twenty-four hours varies with the condition of the patient. If he has been deprived of liquids for some time before the operation he will require a large amount during the first twenty-four hours, and it should be given to him. In such cases thirty minims per minute is not too much, and sometimes a patient will retain as much as forty minims per minute. After the body has been supplied

with liquids, however, from fifteen to twenty minims per minute will be about all that the average patient will retain. There is no special harm if the normal saline is given a little too fast, especially after the first two or three days. The extra amount will wash out material from the lower bowel, and also stimulate the expulsion of gas. Normal saline should be given per rectum until the patient is taking enough liquid by mouth to take care of the body's need. If, for any reason, the patient does not retain normal saline, or it is impossible to give it per rectum, the patient should be given normal saline subcutaneously or intravenously, so that the body is kept supplied with liquids; in fact some surgeons are adopting the continuous intravenous injection in preference to giving it per rectum. The total quantity taken in twenty-four hours should be carefully recorded, the amount expelled, and whether or not it was with flatus should be noted. Vomiting after the first six hours should be reported to the physician by 'phone if he is not in the building, and all orders should be carefully written by the doctor in charge. The success will depend, to a very large extent, upon the careful detailed work of the nurse who is following out orders, and the closeness with which the case is watched, for complications will arise constantly. After three or four days the patient can be given a small amount of water by mouth, which is increased gradually until he is on a liquid diet, in about a week after operation in the ordinary case. I think it is better to keep away from a heavy diet a rather long time. The patient should not be given solid food until the second week, and not then if he is running any temperature, or if there are any signs of excessive tympanites or pains in the abdomen; however, if the abdomen is soft, and the temperature is normal during the second week, the diet can be increased until the patient is getting sufficient nourishment to gain in strength and weight.

Most patients with general peritonitis are more or less restless, and should be given, not only enough morphine to keep them from suffering, but morphine should be given frequently enough to stop very largely the peristalsis of the bowels. This means a sixth or an eighth of a grain of morphine three or four

times a day during the first two or three days with the average patient. I believe we make the mistake of giving too little, rather than too much morphine during the early days of a general peritonitis. Nothing is so effective except keeping food away towards stopping peristalsis and the spread of infection as morphine, and we have found that it is not a depressant in any way, but, rather, that it is a stimulant, in that it keeps the patient quiet and conserves his strength. It is also beneficial in helping the patient retain the normal saline. Other medication consists only in giving stimulants as needed. This, then, would be the routine handling of a case of general peritonitis for the first few days.

The next question is the care of the wound following operation. Wet dressings are universally used; and they should be kept up as long as there is any drainage from the abdomen. The drainage used by most surgeons at the present time, I think, is the common cigarette-drain. Unless the infection is well localized, as a rule two drains are inserted at the time of operation. After the first two or three days these tubes should be loosened up, and at least one gradually removed. We have followed the plan of inserting one small and one large cigarette-drain, removing the large cigarette-drain rather rapidly, but leaving the small one in until we feel sure that there is no longer deep infection. If we have a deep walled-off abscess of long standing in which there is a large amount of inflammatory tissue, it is necessary to leave our drainage tubes in much longer than in a simple case of general peritonitis, due for example to a ruptured appendix. In most cases the drainage-tube should be taken out in from seven to ten days after operation. If there is still doubt as to the presence of deep pus, when the last drainage-tube is removed, we have inserted a small catheter to keep a tract open, and yet to allow the muscles to come together. We have adopted the system of removing the drainage-tube as soon as we feel that the drainage is coming from the tract of the drainage-tube alone and not from any abscess cavity deep down. This is shown by the absence of fever and abdominal rigidity, and by the fact that the drainage has decreased in amount until it stains only a small portion of the dressings.

In all cases in which a large portion of the original incision is sewed up at the time of operation, we insert a small drain at each end of the original incision down to, but not through, the peritoneum. I believe this is a great help in preventing the formation of subcutaneous and inter-muscular abscesses.

I do not think it makes a great deal of difference what kind of antiseptic is used in the wet dressings. In case a fistula develops, the skin around the wound should be protected by some soothing ointment. If there is a wide skin surface to heal over, we have recently used small adhesive strips covering the edge of the wound. These stimulate the growth of skin, so that it heals more rapidly. The patient should be kept in bed until the skin incision is entirely healed. The muscles do not heal more quickly than the skin, and the tendency is to allow these patients to be up too soon, with the result that we get a weakened abdominal wall, if not a ventral hernia. Tympanites that develops may be troublesome, but it is usually taken care of by giving the normal saline per rectum; if, however, the patient is not able to expel gas, a stimulating enema may be given. If we feel that the tympanites is caused rather by an atonic condition of the bowels, it is best treated by giving pituitary extract. We have found that, given in moderate doses, it assists very materially in the expulsion of gas, and we have seen no bad results in connection with its use.

What are complications, and how are they to be treated? In a review of our cases we have found among the early complications the most frequent serious one to be some form of obstruction. This in a mild form developed in about 8 per cent. of our cases. I do not mean by that that we have a complete obstruction of the bowels in 8 per cent., but, rather, that in 8 per cent. of our cases we had enough obstruction to require active treatment. A large percentage were mild cases, and cleared up in a day or two. When obstruction develops everything by mouth should be taken away, and normal saline given per rectum. I do not believe it is necessary to give a large number of stimulating enemas, although one every day or two helps. Careful nursing is very important in these cases. Care in handling the patient, care to prevent bed sores, and especially

care in keeping the patient in the Fowler position and comfortable. This care cannot be given by a probationer or a practical nurse in the country. It requires the constant watchfulness of a well-trained nurse. It is very important that the normal saline be kept going at the proper speed. The number of drops per minute should be counted and recorded frequently. If the obstruction is very marked the stomach will soon begin to fill up with fecal matter, and should be washed out, at least, every six or eight hours.

This lavage of stomach should be continued at regular intervals until you no longer get material when you use the stomach-tube. At the same time the lower bowel should be washed out, and normal saline given. If the patient does not retain the normal saline, fluid must be supplied by giving subcutaneous or intravenous normal saline. As a rule, in two or three days a mild obstruction will disappear, and the patient will again begin to pass flatus, and the bowels begin to move. In the more severe cases it may take six or eight days before such a result is obtained, but I believe that this treatment should be persisted in if the patient's condition warrants, rather than that operative measures be attempted. We have had a number of cases in which the patient has taken nothing by mouth for over a week, and yet has suffered very little. It is surprising how good their general condition will stay if the stomach is washed out at regular intervals, and the fluids are supplied. Here, again, morphine is indicated, not only to relieve pain, but also to stop the peristalsis, and thus relieve the obstruction. It should be given early and in good-sized doses. If, under this treatment, the obstruction is not relieved, and operative treatment becomes necessary, the more simple the operation the better. If the drainage-wound is large enough, and if a loop of bowel presents itself in the drainage-wound, the most simple operation is to open that bowel, and thus produce a fistula. This will relieve the obstruction and cause absolutely no shock to the patient. If this is not possible I believe it is better to open the abdomen away from the site of the original operation than it is to try to relieve the obstruction by going through the original opening into the abdomen. This can be done under

local anesthesia. The first loop of distended bowel, the lower down the better, should be brought out and drained. This should be closed off when the obstruction subsides. The danger, however, is of operating on these patients too soon, rather than too late. If properly treated a large majority of these obstruction cases will finally let loose, and the patient recover; and we all know that any operative procedure in the way of relieving the obstruction is attended by a very high mortality.

Fecal-fistula, as a rule, is only temporary, and not a real complication. In a very small percentage of cases, considerably less than 1 per cent. with us, there was a permanent fecal fistula, which required operation later. Fecal fistulæ occurred more frequently where there was a localized abscess which was opened without the removal of the appendix, than in any other class of cases. Where the appendix was removed, as was done in practically all the cases of general peritonitis, there were very few cases of fecal fistulæ following the operation. We are not getting nearly so many fecal fistulæ now as we did a few years ago, due to two things: first, the fact that we take out the appendix in a much larger percentage of cases than we did a few years ago, and, secondly, because we are not using the hard drainage-tubes that we did at that time, and are not leaving them in so long. The temporary fecal fistula requires no special treatment; it usually clears up in ten days or two weeks without any special symptoms. If there is a permanent fistula, it usually means that there is an old stump of the appendix that is still draining, or, perhaps, a gall-stone or an atrophic gall-bladder that must come out. After the patient is up and around and in good shape, which is usually several months later, this fistula is dissected out and the bowel closed.

Another troublesome complication is the formation of localized abscesses following the drainage of a case of general peritonitis. These may be multiple or single. If multiple they usually develop soon after the abdomen is drained, or even before, and occur in patients that have had the general peritonitis for some time before the operation. They are more likely to occur if the source of infection is high up in the abdomen. This means a very serious condition, and one which is

usually attended by death. A single abscess, however, is not such a serious complication. It more frequently develops in the pelvis or in the neighborhood of the drainage-tube. Occasionally we find a perinephritis, or rather a retrocecal abscess, which points into the lumbar region following a pus appendix. If the abscess is located close to the drainage and if the drainage is maintained down through the muscles into the abdominal cavity, the abscess usually drains spontaneously into the drainage tract, and is discharged through the regular opening in the abdomen. If, however, the abdominal wall has been allowed to close over, and an abscess developed deep down, it is necessary to go in again and drain. This is also necessary if the abscess develops at a point far away from the original operation. Pelvic abscesses in women should be drained by making an opening in the cul-de-sac through the posterior fornix of the vagina. I might say that pelvic abscesses are not nearly so common as they used to be, because of the fact that we now put drainage into the pelvis in all cases of general peritonitis. Most of the abscesses can be opened under local anesthesia, and this form of anesthesia should be used. If the abscess is deep a general anesthetic may be required. Our next most frequent complication is phlebitis. This, however, is not peculiar to infected cases, though more liable to occur in them than in clean operating. We have not been able to find any method that seems to be of benefit in preventing this troublesome complication. Early immobilization, elevation of the limb, and a compression-bandage certainly shorten the course of this complication. It requires from three to six or eight weeks, as a rule, for the patient to get out of bed, and then it is necessary to wear some elastic support for a period of months or possibly years.

In our list of cases we had three serious secondary hemorrhages from the abdominal wound. One was in a woman with a blood-pressure of 220, in whom the superficial epigrastric artery ruptured, forming an immense extraperitoneal hematoma, which, however, was controlled by pressure at the time. The other two cases were from deep down in the abdomen. One was controlled by packing, but in the third case we were not

able to control the hemorrhage in this way. We found that by maintaining a constant pressure with the finger over our gauze pack we could stop the hemorrhage, and that is what we did. For six hours we maintained constant pressure with the fingers, and in that way succeeded in stopping the hemorrhage, and the patient recovered. It is a very serious complication, however, and one for which I have a very wholesome respect. In one case I think it was due to a high blood-pressure, in another it was caused by leaving in the tubes too long, and the third came without any known cause. These hemorrhages should be prevented by using soft cigarette-drains and by not leaving them in any longer than is necessary.

We found two cases of acute dilatation of the stomach which were not associated in any way that we could find with obstruction. This is also a very serious complication, accompanied by shock and prostration. Both cases were treated by frequent aspirations of the stomach, a large amount of fluid being obtained in the first aspiration. During the first day the aspirations were repeated every four hours, and after that every six hours until the dilatation disappeared. The last case we also treated by giving pituitary extract hypodermically, and I think shortened the course very much.

Of the late complications, permanent fistula, of which we have spoken, and ventral hernia are the most important. The prevention of the hernia is more important than the cure, though I do not believe it will ever be possible for us to prevent hernia appearing in some of these cases. The abdominal opening should not be left any larger than is necessary for free drainage. Any muscles that have been cut, if there are any, should be sutured together, even in a pus case, and it is very much better not to cut through the muscles, but, rather, to use the splitting operation in these cases. Free drainage during the first two or three days is absolutely necessary, but, in order to prevent hernia, the drainage-tube should be removed as soon as possible. If there is any doubt about pus being present, a small catheter can be left to keep the tract open, and yet allow the muscles to come together and heal. Hernia, of course, is much more liable to occur in cases where a prolonged drainage

is necessary; and, I believe, it is much more frequent in the upper abdomen than in the lower abdomen, if we consider the relative number of cases. In the prevention of hernia I believe it is necessary to keep the patient in bed much longer than we are accustomed to do. I do not think that a patient after a pus case should be allowed up after the abdomen is drained until the skin wound is completely healed. It usually takes from three to six weeks for a patient to completely recover from these operations, and eliminate as far as possible the danger of hernia. The wearing of a simple abdominal support following operation helps prevent hernia, and it should be worn from three to six months or a year. It is also necessary that the patient avoid any heavy lifting for a long period of time. If, however, a hernia has developed, of course the only thing to do is to wait until the wound is absolutely free from infection, and then to do a secondary operation and close it off.

We found two cases in which there developed, following a ruptured appendix, a general pyemia. One of these developed multiple abscesses over the body, which were opened, and the patient recovered nicely. The other patient developed an acute articular rheumatism, septic endocarditis, chorea, and a hemorrhagic nephritis. It has now been about fourteen weeks since we removed her appendix, which was ruptured, and the abdomen has healed up completely. The septic condition continues, however, and her recovery is doubtful.

I have not taken up such complications as post-operative pneumonia, which are in no way peculiar to infection of the abdomen. I know that I have presented nothing new to you, but I hope that I have stimulated discussion of the subject. Those of us who are doing surgery in a relatively small way find these cases the ones that require most of our thought and attention. While the general principles involved in the treatment of these are well established, yet there are no cases where close watching and care about the details of treatment will give as much help as in these. Many lives have been saved by very careful and persistent work. We shall always have these infections of the abdomen, and they will always be attended by a high mortality, but constant effort on our part will enable us

to save more and more of them as we learn better the fundamental principles of treatment, and how to follow them out in detail.

Discussion.

Dr. H. M. Waldren (Drayton): Dr. Ewing has presented this subject, which is probably of greater interest to us as surgeons, owing to the frequency with which we have to deal with it, than any other which we are compelled to face, in a very masterly manner, covering his subject very thoroughly. I would like to lay emphasis on a few of the points the essayist brought forward. The matter of conserving the patient's strength by sedatives in the form of narcotics is one of the essentials. In these cases opium should be pushed till it gives rest to our patients, for nothing is to be gained by permitting a patient to thresh about, as we usually find them doing, when the surgeon is of the belief that the drug is contra-indicated because of its tendency to lock up the secretions. Unless contra-indicated, due to a pre-existing nephritic condition, it should be administered in the form of morphine hypodermically in sufficient quantity to obtain the desired restful state in the patient. No rule can be laid down as to amount to be given in the individual case. In our work we commonly employ from one-sixth to one-fourth grain.

In the use of the saline solution we, in our work, believe in going a little farther than Dr. Ewing recommends, giving it intravenously before the patient is returned to the ward, then following with the Murphy drip. The morphine and the saline make a fine team, each working with the other, the saline assisting in the elimination and off-setting the untoward effects of the opiate. I wish to say that the Murphy drip should be the complete apparatus, not a makeshift as we frequently find.

Too much emphasis cannot be laid on drainage. Years ago we all left the drainage-tube in too long, sometimes leaving it until nature pushed it out. Modern practice is to get the drain out as quickly as possible, as determined by the general and local symptoms. It is surprising how soon a drain comes to drain only the space occupied by itself. Many of the discharging wounds we have come to us are the result of too prolonged

drainage and an improper type of drain. The old glass and stiff rubber drains have been discarded for others, soft, pliable, and gentle.

Of late in our work we have gone back to an old friend, the supplementary flank drainage, which fulfils, in our estimation, essentials not obtained in the regular drainage through the operative incision. The more we are using it the more we are impressed with its usefulness. Regarding drainage and the possibility of post-operative hernia, I have this to say. The operation for peritonitis is a life-saving measure, and any decision must be made having in view that the life will depend on proper and efficient drainage, whereas, if the patient comes through, there will be a proper time to repair the hernia should one occur. If the drainage is not sufficiently free, it is going to give rise to complications, and will probably be the deciding factor in the case.

I want to say here that there are three fundamentals in operations for peritonitis, namely, speed, gentleness of manipulation, and efficient drainage; and the successful men operating on these cases meet these requirements.

I did not hear the essayist mention the necessity of keeping in mind the possibility of hypostatic pneumonia in the feeble or aged. This condition is best met by being on the watch for it, or, better still, being ahead of its development by the usual measures to guard against, if possible, its onset.

In conclusion, I want to say how thoroughly we appreciate Dr. Ewing's statements relative to the surgical nurse in a case of this kind. In private practice there is no one thing so conducive to the peace of mind of the surgeon as to know he not only has a trained nurse, but has an experienced surgical nurse on the case, one who knows what to look for and who makes prompt reports. Many times I have felt extremely grateful to the nurse on the case, and frequently have felt that a fair share of the credit for saving the life of the patient was due to her vigilant care.

I again congratulate Dr. Ewing for covering this broad and difficult subject in so capable a manner.

Dr. Thomas Mulligan (Grand Forks): I wish to ask Dr.

Ewing to clear up some doubts in my mind about removing drainage-tubes. Does he remove the whole tube at one time, or withdraw it for an inch or two and cut it off and remove more in twenty-four hours? In other words, does he use the gradual withdrawal or withdraw *en masse?*

One thing he did not touch upon was the use of the anti-streptococcic serum post-operatively in septic cases. I would like to know his experience. My experience has been such as to give it a place in septic cases.

Another point which he may have mentioned and which slipped my attention is the use of the hot stupe to the abdomen as a preventive of post-operative ileac trouble. I have found this to be a very effective measure at times.

Dr. V. J. LaRose (Bismarck): There are a few points I would like to place emphasis upon. First, gastric lavage. We are in the habit of washing out the patient's stomach, even before he leaves the operating table in a case of pus-filled abdomen and then leave a standing order if the patient vomits the dark-green fluid that the nurse shall wash out the stomach immediately and keep the stomach clean.

Another point about the drainage: A procedure I have used very successfully is a method of getting the drain into the pelvis. In all these cases of free pus in the abdomen there is pus in the pelvis. I do not refer to the walled-off abscesses, but to the free pus cases. We use the short proctoscope, and pass it down into the pelvis and then take the cigarette-drains and place them in that way, and then pull out the proctoscope. I think you will find, in trying to place several cigarette-drains into the abdomen, that you place them and think you are going to the bottom of the wound, when, as a matter of fact, they are all curled up and do not reach the bottom.

As to the establishment of a fecal fistula: I do not believe that is done often enough.

I think Dr. Ewing emphasized the fact that we should operate early, and not late. I have never seen a case in which I regretted early interference, but have seen late ones. I make it a point to bring out a loop of the bowel so that there will be a fistula at the wound and the dressing will hold it. If

you reach in and pick up a loop you will have a bad time on account of the skin excoriation due to the fluids exerting a digestive effect upon the skin; but you will not have this trouble with a little fecal fistula. In establishing the fecal fistula and putting in the catheter, if you will first put the catheter just inside the serosa and then put a puckering string around so that you invaginate the portion of the serosa back in the belly, this will close the fecal fistula automatically when you remove the drain.

Dr. W. F. Sihler (Devil's Lake): These cases are troublesome to all of us, and we are always glad to hear the experience of somebody else and perhaps pick up something of value. It is very seldom that two cases terminate just exactly the same, and one's technic constantly changes. I think in these cases the principal thing and the one of paramount issue is the thoroughness of the drainage. I mean by that the proper placing of the tubes, and, previously to that, pretty thorough inspection of conditions inside to enable one to decide exactly where the tube should be placed. I have found the pelvic drain to be best when it is good and large. I have used soft rubber tubing, as soft as I could get, and usually put a little strip of gauze inside so that it can be removed within the first twenty-four hours. This last fact, I have found, increases the usefulness of the tube for drainage, as it removes the fresh blood-clots caused by oozing at the time of operation. I then remove the tube as soon as possible, gradually for the first forty-eight hours and then remove it completely and replace it with a little bit of gauze, just sufficient to keep the entrance opening patent.

In appendix infections, even though the infection is local, I have found that taking care of the retrocecal fossa is a very good plan. I have not used the stab-drain for a good while unless the infection was wholly retroperitoneal, for I have found that nothing comes from it after a day or two, and its position is irritating to the patient and limits his position in bed.

Of almost equal importance to my mind is the position of the patient in bed for the first twenty-four or forty-eight hours subsequent to operation. I put him up in a half-sitting or Fowler's position, and thus take advantage of gravity.

Dr. Ewing (closing): Dr. Waldren spoke of the intravenous normal saline method instead of the drop method. It is interesting to know that some of the men in the East are using a continuous intravenous normal saline. They have a small machine which injects a certain number of drops per minute into the vein. The machine is run by an electric motor, and the operator can regulate the amount of saline that is being introduced into the system. We have not introduced this yet, but I think it is a good thing, and we are going to use it. Many times we put the saline into the vein, especially on the operating table.

We have practically abandoned the puncture-wound over the groin. We do it in a few cases, but only where we feel that we have a large amount of pus in the abdomen, and there is danger of multiple abscesses. In that case we usually drain over the left groin to take care of any abscesses that may develop from the site of the other incision.

Our practice has been to introduce a small tube, or sometimes a large one, behind the cecum, and a second tube into the pelvis. The first is taken out rather rapidly, within the second or third day. We remove the drain that goes down to the pelvis an inch or two at a time.

I am glad Dr. LaRose mentioned washing out the stomach. We do that far too little. We have not followed his rule of washing out the stomach before leaving the operating table, but I think we shall.

In case of obstruction, it is a good thing to go through the wound and produce a fistula, and there is no reason why you should not open it when the obstruction first develops. I think you should not go into the abdomen elsewhere to relieve the obstruction, except as a last resort; and when done it should be on the other side, away from the adhesions.

Society Proceedings

ACADEMY OF MEDICINE, TORONTO

Dr. Gordon Bates recently read a paper on a Gonorrheal Clinic. The best place for such a clinic is a hospital or public building; if in a hospital there should be beds for patients undergoing operative treatment. The cost of equipment would be $1.000. This was not too much when one remembers that a proper microscope and two urethrascopes and a cystoscope would take half of this appropriation. The personnel of the clinic may be from three to twelve or more. There must be a clerk, an orderly, a specialist, medical officer and a social service nurse. Many returned C.A.M.C. officers are equipped for these duties. In a model clinic there is an historian who after taking a history passes the patient on to an examining surgeon, who takes smears and directs treatment. The patient then goes to another officer who carries out the treatment ordered. The notes by the above named officials are scribbled on pads, then collected and typed. Probably the two most excellent clinics in America are to be seen in Buffalo and Brooklyn. The history sheet of the latter clinic was exhibited to the members present. The main feature was the easy survey of all the points, which was particularly helpful where there was a rotating service. Each clinic should be provided with a standard list of abbreviations. The public should be educated up to the necessity of reporting early. Gonorrhea seen within twenty-four hours could be cured within a week by use of five per cent. argyrol sealed in. There should be a trained orderly available familiar with this method. Acute cases who have passed the twenty-four hour limit, with anterior urethritis, should be treated by irrigations, and can be cleared up in three weeks.

Chronic cases constitute the big problem. Careful examination is most important. Strictures are common; out of every ten chronic cases, two are found. Prostatitis is nearly always present. These are tedious. In answer to the question, when is it safe to marry? One would say, after two negative complement fixation tests, three weeks apart. How may facilities be made most available to people at large? By publicity. The United States Public Health Service has over 600 letters of inquiry per week. After showing of the film "The End of the Road" there was in Toronto a marked increase in the number of patients seeking treatment.

Dr. Bates then read an advertisement in a recent number of the *Saturday Evening Post*, which called attention of manufacturers to the importance of looking after their employees suffering from this disease; and how it was to their own interest financially so to do. He also handed around office and clinic illustrated placards containing educative and admonitory legends.

These patients should not be looked upon merely as objects of scientific interest, but as human beings and members of the community. More important than his own cure was to see that he does not spread the disease. These cases should be handled in an attitude of optimism and friendliness; all rough and ready methods should be absolutely avoided.

THE PEEL MEDICAL ASSOCIATION

The Eighth Annual Meeting of the Peel Medical Association was held in Brampton on Wednesday, October 20th, 1920. There was a full and representative attendance from the whole county, emphasizing their conviction in no uncertain way that such a society is very useful to the profession and also to the laity in general. The splendid papers read at the Association afforded the doctors new hope and inspiration to continue the work begun until a perfect standard is reached.

A paper read on Tonsillectomy by our esteemed President, Dr. W. D. Sharpe, Brampton, was much appreciated, containing

as it did, so many practical points as to the necessity of the operation and the benefits to be expected by the patient.

Dr. F. W. Marlow, Councillor for the district for the Ontario Medical Association, was present and read a paper on "Pelvic Inflammations" which the doctors regarded as a real intellectual treat, particularly as it supplied the points and facts so perplexing to the country doctor, and also his views as to operative measures and local and general treatment in such cases.

Dr. Wm. Goldie, of Toronto, gave a valued and most practical contribution to the Association on "Some Explanation of Gastric Disturbances," dwelling particularly on the interpretation of symptoms, in a most masterly manner, and it was considered one of the finest papers ever read at the Association.

Dr. T. C. Routley, Secretary of the Ontario Medical Association, spoke to the Association on "Progressional Inertia;" also the etiology, diagnosis and treatment, having in view the progress and betterment of the medical profession throughout the province.

The Peel Medical Association was one of the first to affiliate with the Ontario Medical Association and is in good standing at the present time.

A resolution was passed at the meeting making the annual fee for membership in the Ontario Medical Association five dollars.

The following officers were re-elected for the ensuing year: Dr. W. D. Sharpe, Brampton, President; Dr. D. Heggie, Brampton, Vice-President; Dr. A. F. Reynar, Palgrave, Secretary-Treasurer; Executive Committee, Dr. W. Bryden, Brampton; Dr. T. I. Bowie, Streetsville; Dr. J. A. Lawson, Brampton.

A. F. Reynar,
Sec.-Treas. Peel Medical Association,
Palgrave, Ont.

Personals

Colonel Alexander Primrose, one of Toronto's best known surgeons, has been appointed Dean of the Faculty of Medicine in the University of Toronto, to succeed Dr. C. K. Clarke, who resigned a few months ago.

The new head of the Faculty of Medicine is widely known, not only in Toronto, but throughout Canada, as one of the outstanding surgeons of the Dominion. Col. Primrose has for some years been Professor of Clinical Surgery at the University, and left to go overseas with the University Base Hospital. For his services with the Base Hospital, he was afterwards appointed Consultant to the Canadian Forces in England. His only son, Lt. H. P. Primrose, a graduate in 1918 from University College, was killed when flying in France.

We extend our congratulations to our collaborator and feel that his appointment as Dean will mean added strength to the Faculty of Medicine.

Major-General J. T. Fotheringham, C.M.G., upon retiring from the duties of Director-General of Medical Services, desires to take leave of all officers, nursing-sisters and other ranks of the medical services, both those who are still serving and those who have been demobilized, but who have at any time served under him.

He is deeply sensible of the constant loyalty and high efficiency of the service as a whole, both overseas and in Canada, and of his indebtedness as officer administering the service in Canada to the personnel as a whole.

The memories of the Great War, with its priceless opportunities for serving King and Empire and Native Land, will

remain an inalienable asset to us all, and particularly the goodwill shown by the service and by the profession generally to those who have been carrying the heavy burdens of responsibility for policy and administration, both at this headquarters and in the districts.

MAJOR FREDERICK COLLING, O.B.E.

To be decorated with the Order of the British Empire is the rare distinction to be conferred on a Toronto man—Dr. (Major) Frederick Colling of 460 College Street. Additional interest is attached, as the decoration is one of the most coveted of all military honors, and possessed by very few Canadians.

The honor was awarded for distinguished service in Siberia, where the doctor served for over a year and remained alone after the Canadians left for home. The doctor is a very modest and reticent man, and refuses to talk about himself or his deeds. It is known, however, that he made unusual practice of his medical skill during the smallpox and typhus epidemics.

He went overseas six years ago, and spent three years in France and served in the front line trenches. His award was granted for actual work performed in the service of the Empire. The doctor is on the staff of St. Michael's Hospital. He is a graduate of Toronto University.

COST OF ILLNESS BOOSTED BY OWOSSO PHYSICIANS

The Owosso Physicians' Society, in announcing an increase of thirty per cent. in fees, declares in justification that doctors who died from 1890 to 1915 left estates averaging $200. "Their astonishing financial success can only be explained on the theory that each of them got hold of the lifelong savings of several school teachers," reads the announcement.

Obituary

DR. W. J. GIBSON, BELLEVILLE—AN APPRECIATION

Some years ago a lad stood amongst a gathering of men, young and old. He was flushed with pride, and justly so, for this lad had just won the plowing championship of his county and was receiving the congratulations of the other contestants, all many years older. This boy was characteristic of the man of later years.

William John Gibson was born on a farm, "Elmgrove," about five miles from Kingston, in 1850, and continued to live there until 1874. He was of sturdy Scotch parentage, his grandparents on both sides being "Covenanters."

In 1870 he entered Queen's University, walking daily from the farm to his classes, and graduated B.A. in 1874. He taught school in Arnprior for a year or two, then took his M.A. and accepted the position of Principal of the Renfrew High School, remaining there through 1879. Leaving there, he re-entered Queen's in the faculty of medicine and graduated M.D.C.M. three years later.

He at once settled in Belleville, where he remained in active practice up to the time of his death. He was a constant reader and a hard worker, and soon established a reputation as a consultant throughout Central Ontario. Always specially interested in Surgery he became known as a skilful diagnostician and successful operator, and his services were in constant demand in all the district.

He was always ready and glad to help another practitioner, and nothing was too much trouble for him if he could assist in helping to brighten the way of a fellow worker.

He was widely known in the profession and had office as President of the Belleville Medical Society and the Bay of Quinte Medical Association several times and also as President of the Ontario Medical Association.

In 1914 he was elected a Fellow of the American College of Surgeons, and was a regular attendant of their meetings.

In the passing of Dr. Gibson, the profession generally has sustained a great loss, and in his own community, not alone the loss of a skilful practitioner but that of a staunch, true friend, leaving a vacancy that cannot be filled.

The life just closed will always be a stimulus to the younger men of this district, demonstrating what may be accomplished if one possesses true, underlying, manly principles and combines these with hard and faithful work. H. A. Y.

The Physician's Library

International Clinics. A Quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, rhinology, laryngology, hygiene and other topics of interest to students and medical practitioners by leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D., Philadelphia. Volume II. Thirtieth Series, 1920. Philadelphia, London and Montreal: The J. B. Lippincott Co. 1920.

In the section on clinics that voluminous contributor, Cumston, of Geneva, writes instructively on interesting topics of clinical surgery, and our old Trinity graduate, Hugh Mackechnie, of Chicago, contributes a clinic on prostatectomy and cholecystitis complicated with gastric ulcer.

In medicine, Lloyd Thompson deals with skin lesions of lues; Geo. Bachy with cholecystectomy; Leon Bailly with arterial occlusion in diphtheria; E. O. Otis, the teaching of consumption to students. Drueck contributes an article on the treatment of piles under local anesthesia, and J. J. Walsh on neurasthenia. These form only about one-third of the papers —all of which are valuable.

A PHYSICIAN'S EXPERIENCE*

The best all-round medicine for continuous and daily use, fool-proof and non-injurious, quick acting and soul satisfying, is a morning glass of Plutowater, together with a glass of plain water at least fifteen minutes before breakfast, taking just enough to produce one daily stool, writes Dr. H. N. Jennett, of Kansas City, Mo.

The absence of griping is a marked characteristic of Plutowater. This is due to the fact that it acts as an intestinal bath rather than as an irritant of the mucosa, as characteristic of most cathartics and even calomel. The advantages of this kind of elimination are apparent, especially so when the continued use of laxatives become necessary.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

SURGICAL GAUZES*

The uses of surgical gauzes in the practice of medicine and surgery, and especially in the hospitals, are almost innumerable and are familiar to every physician. It may be stated in a general way, however, that the chief functions of gauze are those of protection and absorption. Various meshes are used for various purposes. To make even and smooth dressings for "clean" surgical cases and for certain packs and drains, the finer mesh gauzes are preferable. For mopping, sponging and to use in the presence of excessive discharges from wounds, in other words, as a waste material, the gauze of wider or coarser mesh will be found satisfactory. Gauze is easily and surely sterilized and, therefore, may be positively freed of living pathogenic micro-organisms. This sterilization is best accomplished by super-heated steam in an autoclave.

One of the largest manufacturers of surgical gauze in the world is Bauer & Black. Of one thing the physician can rest assured and that is that gauzes, in fact any form of surgical dressing, bearing the name "B. & B.," are absolutely dependable

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and cannot be excelled anywhere. The firm of Bauer & Black, Chicago, New York and Toronto, are one of the oldest firms manufacturing surgical dressings in the world, and have every reason to be jealous of their reputation in the surgical world. When purchasing anything in this line, see that the label bears the trade mark " B. & B."

THE FORD COUPE*

From the viewpoint of the professional man whose duties necessitate travelling at all times and under all conditions, the Ford Coupe is undoubtedly the ideal means of transport, and the number of these cars now in use by the medical profession bear eloquent testimony to their well deserved popularity. In these strenuous days when everyone is obsessed with the unwelcome attentions of that old bugbear the H. C. of L., the question of car cost demands serious consideration, and no matter from what angle it is viewed the Ford invariably supplies the correct and logical answer. However, to the man who has to keep his car in constant use, the cost of upkeep is not the sole reflection. Comfortable riding and adequate protection from adverse weather conditions are matters which demand his attention in order to preserve his health, and it is in these essentials that the Ford Coupe finds such enthusiastic support among professional men in all walks of life. The Coupe was designed and built with an eye to comfort, and the result is a car wherein it is a positive pleasure to ride; a glance at which, with its quiet, well ordered lines, is sufficient to convince the business man that it is the ideal car for his use.

ICHTHYOL IN COLLAPSIBLE TUBES*

Acting upon suggestions from a number of the profession Merck & Co. are now supplying Ichthyol in 1-ounce collapsible tubes, for convenience in dispensing and administering. A physician who was among the number that suggested the collapsible tube, points out the three following advantages in his estimation: 1. The Ichythyol will be dispensed in a sealed, original package. 2. The tube tends to prevent evaporation,

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thereby insuring uniform strength. 3. For the doctor, nurse, hospital and druggist—economy, ease and convenience in handling.

TWENTY-ONE YEARS YOUNG*

E. G. West and Company is, possibly, well and favorably known to almost every doctor in Eastern Canada. This firm was one of the pioneers in catering to the needs of the medical profession, especially the country practitioner. Not only in speed and accuracy in filling orders, but for the number of special lines it puts up for professional uses. Its major use is the prevention and relief of constipation. But it has been found most efficacious in the relief of smoker's throat. A Par-ol gargle provides immediate relief, from the bitterness of a palate and a dryness of the roof of the mouth, incident to over-smoking. It is also most useful in cleaning out the nasal passages of young children. A few drops on cotton wool placed in the cavities softens the mucus, making its removal easy and painless, thereby keeping the breathing passages free. Absolute conformity to the standards of the British Pharmacopeia is the guilding principle of E. G. West and Company, hence in specifying their preparations the medical profession is assured of conscientious co-operative service.

SAL HEPATICA*

This preparation is an agreeable effervescent saline laxative and uric acid solvent, and has rapidly gained the favor of physicians generally. It is a combination of lithia and sodium phosphate with the laxative salts similar to those found in the most famous European bitter or purgative waters. The action of the salts held in solution in the "bitter waters" is too well known to demand specific elucidation, but their remedial value is considerably enhanced by the addition of lithia and sodium phosphate. Sal Hepatica can be employed as a laxative and eliminant of irritating toxins with safety and satisfaction in inflammatory conditions of the bowels, and is worthy of a prominent place in the diarrheas of infancy and childhood, and in "summer complaints" which arise from fermentative and putrefactive causes.

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FARWELL AND RHINES' RELIABLE PURE GRAIN SANITARY SPECIALTIES*

"Cresco Flour"—A flour for Dyspeptics, mild cases of Kidney and Liver troubles, Obesity, Debility, Convalescence, etc. Many Diabetics claim to find it of great service, and all they require.

"*Special Dietetic Food.*"—A flour for Dyspeptics and cases of Kidney and Liver troubles requiring rather strict diet, at medium price.

"*Gluten Flour.*"—A flour for Diabetics and marked cases of Acid Dyspepsia, Intestinal Indigestion, Obesity, Rheumatism, and ills arising from excess of uric acid, containing much more protein than required by the U. S. Pure Food Law.

AUTO-TOXIC ILLS AND THE LIVER*

Auto-intoxication is so frequently due—directly or indirectly—to hepatic torpor, that stimulation of the liver becomes, perforce, the first and most important detail of its treatment. The almost specific action of Chionia in increasing hepatic activity without producing catharsis gives it, therefore, a highly important place in the successful management of auto-toxic conditions. The results that follow its use are especially satisfactory in that they are accomplished through physiologic or natural channels. One or two teaspoonfuls in water, three times a day, will rapidly restore biliary activity and thus remove the train of auto-toxic symptoms commonly described as biliousness.

URASAL*

Urasal is an effervescent granule containing 7½ grains urotropine to each dessertspoonful, combined with piperazine and benzo-citrate of lithium. Piperazine is a base forming with uric acid urate of piperazine, which is very soluble in water and, therefore, quite successful in gout and uricemia, causing a decrease in uratic deposits and a proportionate increase in the quantity of urea. Benzo-citrate of lithium is a well known dissolvent of uric acid and urates. Urotropine is very rapidly

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absorbed and shows itself in the urine fifteen minutes after ingestion, and frequently eliminated in from thirteen to twenty-seven hours. Urotropine has four principal properties: (1) It dissolves uric acid; (2) in its passage through the kidneys it gives rise to the formation of formaldehyde, thus giving antiseptic properties to the urine; (3) it is a diuretic; (4) it is a most effective antiseptic. Physicians will therefore realize how, in cases of uric acid diathesis, Urasal is a most effective preparation. It is manufactured by Frank W. Horner, Limited, Montreal.

PICTURE IN THE SMOKE*

Imagination and foresight in the conduct of affairs—whether domestic, commercial or national—were never so much needed as they are to-day in Canada. Men find in their pipes and tobacco a wonderful aid to the exercise of the imaginative faculty. The pipe puts them in the mood to think things out, to survey the trend of events with that mental outlook which is necessary to a well-planned life. In the home or at the office, Old Chum pipe-tobacco gives valuable aid in solving life's problems.

CALCIDIN*

The march of the months is bringing us nearer to winter and cold and respiratory complaints. In the winter season, if any one remedy can be allotted an outstanding position as regards the general need for it as compared to other remedies, it probably is the iodine preparation given us long ago by The Abbott Laboratories, Chicago, under the name of Calcidin. It is also known as calcium iodized, being a compound of iodine and basic lime. In general, it serves where the iodides are used; it may well be given in their stead for the reason that it is better borne. But its best work is done in acute respiratory ailments. It is useful in bronchitis. For catarrhal croup there is probably no better remedy, pushed to effect. Calcidin is now available in troches, combined with anesthesin, a topical anodyne similar in action to cocaine, but it is virtually non-

*Publishers' Department.

toxic. This troche or lozenge is very effective for allaying throat soreness and irritation. Samples will be sent on request to The Abbott Laboratories.

FELLOWS' SYRUP OF THE HYPOPHOSPHITES*

The following letter is worthy of perusal:—

Dear Doctor:—At the beginning of the war we placed at the disposal of the principal allied nations a quantity of Fellows' Syrup of the Hypophosphites, and we have learned with considerable satisfaction that the use of our preparation greatly contributed to the relief of the sick and wounded. We would call your particular attention to the results obtained from the use of Fellows' Syrup in the Military Hospitals of France in cases of disorders sensory, psychic, and motor in character, including the different phenomena resulting from excessive fatigue and shock of the nervous system. The beneficial results obtained from the use of Fellows' Syrup are due, in the first place, to its happy formula and, in the second place, to the excellence of its manufacture. Its formula embraces potassium, sodium, iron, manganese, and phosphorus in the form of hypophosphites, together with the alkaloids quinine and strychnine—the latter in the proportion of 1/64 grain to the fluid drachm.

THE TREATMENT OF SHOCK*

That the surgeon has in Adrenalin a dependable means of combating shock has been known to the profession for a number of years. As long ago as 1909, Mummery and Symes announced their observations on the effects of Adrenalin upon the blood pressure and recommended its use by the slow and continuous injection of a very weak solution into a peripheral vein. They also found that the action of Adrenalin is enhanced by the coincidental administration of pituitrin, this procedure producing a more marked effect in shocked animals than in normal subjects.

In our advertising section, under the title "Adrenalin in Medicine," will be found a brief review of the plan of treating shock with highly diluted solutions of Adrenalin Chloride, by

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intravenous infusion and by "centripetal arterial transfusion," after the method of Crile.

This little essay is the third of a series of concise and informative papers published in this rather unconventional form by Parke, Davis & Co. We have no hesitation in commending these meritorious articles to the consideration of our readers.

THE EFFECTIVE TREATMENT OF INFLUENZA*

Of the many remedies that have been used and recommended for relieving the headache, backache and severe muscular pains that usher in the average case of influenza, there is none that has proven so effective and serviceable as Phenalgin.

Five grains should be given every 2 or 3 hours for four doses and then every 4 hours until pain and discomfort are entirely gone and the patient's temperature is normal. The anodyne action of Phenalgin is marked, with the especial advantage that it does not depress the heart, suppress bodily secretions, derange the digestion, lead to bowel torpidity, or give rise to any of the evil effects common to the opiates. The marked antispasmodic influence of Phenalgin, in addition to its analgesic action, tends to prevent congestion and restore the circulatory balance. As a consequence the use of Phenalgin in the treatment of influenza not only gives gratifying aid in limiting attacks of the disease to the initial stages, thus reducing their severity and duration, but also proves helpful in preventing the development of complications.

PEPTENZYME, PROTONUCLEIN, NEPHRITIN, TROPHONINE

It seems almost unnecessary to call the attention of the profession to such well known preparations as these, which for years have been found to be strongholds in time of trouble. It can safely be said that each has been weighed in the balances, but *not* found wanting. *Peptenzyme,* a powerful digestant. *Protonuclein,* a preparation of undoubted therapeutic value in neurasthenia. *Nephritin,* a *sine qua non* in kidney disorders, and *Trophonine,* a food that has done wonders during convalescence. Try them, doctor, and you will find the above statements correct.

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Biological
& Medical
Serials

The Canadian journal of
medicine and surgery

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